

## **Comments and Responses to Comments on the EA/Draft EIR**

## *Comments and Responses to Comments on the EA/Draft EIR*

### *2.1 Introduction*

Nearly every final EIR issued pursuant to CEQA includes new information provided in response to concerns raised in public and agency comments. These comments and their accompanying responses, however, are generally not “significant new information” that would require the “recirculation” of some or all of the Draft EIR for additional formal public review and commentary. The same is true with respect to environmental assessments prepared pursuant to NEPA.

None of the comments received on the EA/Draft EIR for the Lewiston–Dark Gulch Rehabilitation Site: Trinity River Mile 105.4–111.7 (project), or the lead agencies’ responses to these comments, constitute significant new information that would require recirculation of the EA/Draft EIR, as set forth in CEQA Guidelines Section 15088.5. More specifically, none of the new information reveals any significant environmental effects not previously identified or any substantial increase in the severity of any previously identified effects. For these reasons, the TCRCD, the CEQA lead agency, directed that an EA/Final EIR be prepared.

### *2.2 List of Commenters on the EA/Draft EIR*

Table 2-1 identifies local property owners and representatives of agencies and organizations who submitted comments on the EA/Draft EIR:

**Table 2.1. Commenters on Lewiston–Dark Gulch EA/Draft EIR**

COMMENTER	INDIVIDUAL OR SIGNATORY	AGENCY/AFFILIATION	DATE PREPARED	DATE RECEIVED
1	Kipp Knorr		11-9-07	11-9-07
2	Katy Sanchez	<b>Native American Heritage Commission</b>	11-29-07	12-3-07
3	Jeffrey Morris	<b>Trinity County Board of Supervisors</b>	12-18-07	12-18-07
4	Mike Orcutt	<b>Hoopa Valley Tribal Council, Natural Resource Division</b>	1-7-08	1-7-08
5	Gary B. Stacey	<b>California Department of Fish and Game</b>	12-28-07	12-28-07

Note: Responsible and trustee agencies under CEQA are noted with **bold** text.

### ***2.3 Comments and Responses to Comments on the EA/Draft EIR***

The TRRP received five letters commenting on the EA/Draft EIR. These letters are reproduced on the following pages. Immediately following each of the comment letters are the responses to each of the comments made in the letters.

To assist in referencing comments and responses, each commenter has been assigned a number and each specific comment a letter of the alphabet. Responses are coded to correspond to the codes used in the margin of the comment letters. Where changes to the EA/Draft EIR text have been made in response to comments, those changes are shown in Chapter 3 of this EA/Final EIR. Comments that present opinions about the project or that raise issues not directly related to the substance of the EA/Draft EIR are noted without a detailed response.

To: Trinity River Restoration

November 9, 2007

Re: Proposed Dark Gulch Project

Input from people affected by this proposed project

***This proposed side channel would greatly impact our view of the river in a negative way .It has taken almost 50 years for the river to now have vegetation that is considered by most to be beautiful. The river now has a ecosystem that is doing very well and for this proposed work to wipe it out for the most part in a few weeks would be tragic and unreasonable. This side channel is not needed because there is a side channel directly across the river and down river a few hundred yards that function very well for salmon habitat.***

a.

***There are other sites up river ( Salt Flat Bridge) and down river ( Buck Tail) that would work and would not have such a negative impact on the river and the people who enjoy the river.***

b.

***It was explained to the people who attended the meeting at the Lewiston Moose Lodge in October that this is just an experiment. The Trinity River is one of the last rivers in this state that does not need to be a victim inconsiderate experimentation. This project is in the name of salmon that is unpredictable as mother nature, the bigger picture is better management of over fishing at all loactions from the ocean to the Indian reservation and on. This will help the salmon population more than experimental side channels.***

c.

***I urge those who are making these decisions to consider the people who enjoy the beauty and bounty of this wonderful river to take a bigger look.***

d.

Thank you for your consideration,

Regards, Kipp Knorr

2826 Goose Ranch Rd.  
Lewiston, Ca. 96052  
530-778-9988



***Response to Comment Letter 1***

This comment letter contains four distinct comments. Following are the responses to those comments.

**Comment 1-a**

It is TRRP policy to work with landowners within or near the project boundaries to implement projects in a manner that is acceptable to the landowner. To this end, TRPP staff visited the commenter at his property on November 27, 2007, to discuss the commenter's concerns about potential impacts at the Dark Gulch site on his viewshed (Visual Assessment Unit 1; Figure 3.14-1c). Since the commenter is primarily interested in retaining the vegetation that obscures the view of tailings on the Trinity River's right bank across from his home, it was agreed that the project would include adequate retention of vegetation at that location.

An additional statement has been added to the bulleted list on page 2-18 of the EA/Draft EIR to ensure that this level of landowner coordination is incorporated into the design/implementation process.

**Comment 1-b**

As the TRRP implements the ROD, it continues to evaluate the potential rehabilitation sites available for treatment throughout the 40-mile reach of the Trinity River below Lewiston Dam. The activity areas described in the EA/Draft EIR were selected by the Trinity Management Council (TMC) based on the best available science. Additional sites within the 40-mile affected reach have been identified for potential treatment in the future based on an ongoing adaptive management program.

**Comment 1-c**

The lead agencies agree with the commenter's statement that the Trinity River should not be subject to experimentation. As stated in the response to the previous comment, the TRRP is charged with implementing the ROD based on the best available science and ensuring that this science is continually incorporated into the channel rehabilitation projects.

**Comment 1-d**

The TRRP will continue to coordinate with stakeholders to refine project designs on a site-specific basis to ensure the best available information is incorporated into the authorized project.



**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-4082  
(916) 657-5390 - Fax



November 29, 2007

Patrick Frost, District Manager  
Trinity County resource Conservation District  
P.O. Box 1450  
Weaverville, CA 96093

RE: SCH# 2007042161 Lewiston-Dark Gulch Rehabilitation Project; Trinity County.

Dear Mr. Frost:

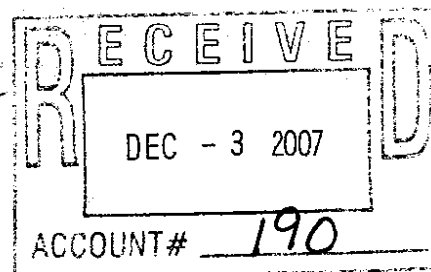
The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. USGS 7.5-minute quadrangle name, township, range, and section required.
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. Native American Contacts List attached.
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

a.

Sincerely,

*Katy Sanchez*  
Katy Sanchez  
Program Analyst



CC: State Clearinghouse



## **Native American Contacts**

Trinity County  
November 29, 2007

Redding Rancheria  
Tracy Edwards, Chief Executive Officer  
2000 Redding Rancheria Road Wintu  
Redding , CA 96001 Pit River  
(530) 225-8979 Yana  
Fax: (530) 241-1879

Redding Rancheria  
Barbara Murphy, Chair  
2000 Redding Rancheria Road Wintu  
Redding , CA 96001 Pit River  
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Nor-Rel-Muk Nation  
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Wintu Educational and Cultural Council  
Robert Burns  
PO Box 483 Wintu  
Hayfork , CA 96041  
(530) 628-5930

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2007042161 Lewiston-Dark Gulch Reha blititation Project: Trinity County.**

***Response to Comment Letter 2***

This comment letter contains one comment. Following is the response to this comment.

**Comment 2-a**

The commenter cites CEQA requirements related to historical and archaeological resources. These requirements have been addressed in Section 3.11 (Cultural Resources) of the EA/Draft EIR. A specialist's report prepared specifically for the project's Area of Potential Effect (APE) details the findings of a records search and previous and recent field surveys. Mitigation measures in accordance with CEQA Guidelines, Section 15064.5, are described in the EA/Draft EIR. Comments have been solicited from local Tribes, including all of those listed on page two of the comment letter (Native American Contact sheet), via written correspondence. The Native American Heritage Commission has been contacted and a Sacred Lands File search has been conducted.





# TRINITY COUNTY

Board of Supervisors  
P.O. BOX 1613, WEAVERVILLE, CALIFORNIA 96093  
PHONE (530) 623-1217 FAX (530) 623-8365

3

NC 153 \_\_\_\_\_  
NC 152 \_\_\_\_\_  
NC 150 \_\_\_\_\_

December 18, 2007

Douglas P. Schleusner  
Executive Director  
Trinity River Restoration Program  
P.O. Box 1300  
Weaverville, CA 96093

**Subject: Trinity County Comment upon the Environmental Assessment/Draft  
Environmental Impact Report for the Lewiston-Dark Gulch  
Rehabilitation Project: Trinity River Mile 105.4-111.7**

Dear Mr. Schleusner,

The County of Trinity would like to thank the Trinity River Restoration Program (TRRP) for the opportunity to comment upon the Environmental Assessment/Draft Environmental Impact Report Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7 (EA/DEIR).

Specifically in regard to the EA/DEIR, the County supports the Purpose and Need of the Project. However, should Alternative 1 or a portion be chosen to be implemented, there is some concern on the part of the County in regards to the downstream portion located at the Bucktail Site.

a.

As you may be aware, the County had participated in replacing bridges located on Poker Bar, Salt Flat, and Steelbridge Roads to allow for the implementation of higher fishery flows as recommended by the Trinity River Record of Decision of December 2000 (ROD). At Bucktail on Brown's Mountain Road, the decision was made to level off the road and install a natural bottom arched culvert for the passage of higher flows, and the original bridge was left intact. During the implementation of fishery flows in the spring of 2006, flows reached an excess of 10,000 cubic feet per second, and the culvert washed out. This necessitated the replacement of the culvert with Bureau of Reclamation's funds, which was originally installed with funding from both the County and TRRP.

JUDY PFLUEGER  
DISTRICT 1

JEFF MORRIS  
DISTRICT 2

ROGER JAEGLER  
DISTRICT 3

HOWARD FREEMAN  
DISTRICT 4

WENDY REISS  
DISTRICT 5

Douglas P. Schleusner  
 December 18, 2007  
 Page Two

To avoid further failures associated with the road surface, the County does not recommend the implementation of the side channel proposed through the Bureau of Land Management's Bucktail Access Site (Site R-3 DG) which would discharge its waters approximately two hundred fifty feet upstream of the existing bridge. To do so would place the residents of the Bucktail Subdivision in jeopardy of losing daily and emergency access to a main road should the culvert or bridge fail during winter flooding events and/or high fishery flows.

b.

However, the County would support the conceptual design for the downstream portion of Alternative 1 at Bucktail, should it be chosen to be implemented, if the existing Bucktail Bridge is replaced with a single span bridge, at the Trinity River Restoration Program's expense. This would avoid impacting the Bucktail Bridge and the people residing there. Such a bridge would also allow for the unimpeded flow of the Trinity River during wet water years, river meandering, floodplain development, and increase potential rearing habitat.

Additionally, if Alternative 1 at Bucktail is selected, an accompanying bridge will need to be constructed in the floodplain to access the private property that would become an island as a result of construction of the potential side channel.

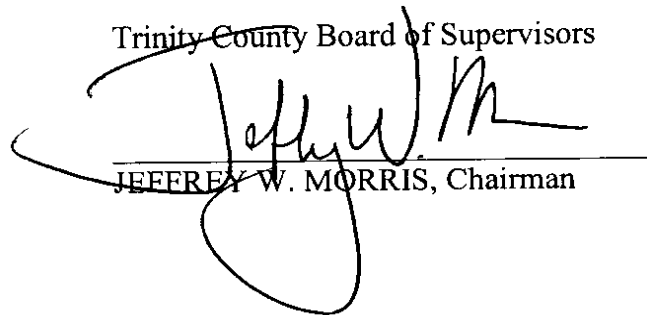
C.

Again, the County would like to thank the TRRP for the opportunity to comment upon a proposed project to restore the Trinity River, and commends TRRP for continuing to do so in a manner that takes into account the needs of both fish and people. The County also looks forward to the continued implementation of the ROD and participation with the TRRP and Trinity Management Council.

If you have any questions regarding our comment, please call (530)623-1351 and contact Principal Planner Tom Stokely (ext. 221) or Associate Planner Joshua Allen (ext. 222). Thank you.

Sincerely,

Trinity County Board of Supervisors



JEFFREY W. MORRIS, Chairman

JWM:TS:wt

***Response to Comment Letter 3***

This comment letter contains three comments.

**Comment 3-a**

The commenter states support for the Purpose and Need for the project, but expresses concern that some elements of Alternative 1 (i.e., R-3 DG activities) could have impacts on Bucktail Bridge immediately downstream. The TRRP acknowledges the concern expressed by the Trinity County Board of Supervisors and continues to work with all members of the Trinity Management Council to ensure that the authorized project does not adversely affect features or residents within the project reaches.

**Comment 3-b**

The lead agencies acknowledge Trinity County's position regarding Bucktail Bridge.

**Comment 3-c**

Comment 3-c requests that the TRRP consider constructing a bridge within Activity Area R-3 DG as an element of Alternative 1. Figure 2.3c in Chapter 2 of the EA/Draft EIR shows the location of the proposed crossing (X-3 DG) and Figure 2.4i illustrates a typical bridge feature that would be constructed over the constructed side-channel at R-3 DG as part of Alternative 1. This bridge would be a permanent feature located on BLM lands upstream of Bucktail Bridge.





**Hoopa Valley Tribal Council**  
**Natural Resources Division**  
**Fisheries Department**  
Post Office Box 417 • Hoopa, California 95546  
(530) 625-4267 • FAX (530) 625-4995



4

January 7, 2008

Brandt Gutermuth, Environmental Specialist  
Trinity River Restoration Program  
P.O. Box 1300  
Weaverville, CA 96093

**Re: Comment on Lewiston-Dark Gulch Rehabilitation Project**  
**Environmental Assessment/Draft Environmental Impact Report**

Dear Mr. Gutermuth:

Successful channel rehabilitation at the Lewiston and Dark Gulch sites is of vital importance to the Hoopa Valley Tribe (HVT). Under the December 19, 2000 Record of Decision (ROD), channel rehabilitation, in conjunction with other management actions, is intended to restore the fishery of the Trinity River to levels mandated by Congress. Based on our review of the EA/DEIR, the Proposed Action fails to optimize site potential to recover fish habitat and will not achieve results matching the Congressional mandate. As a signatory to the ROD, we must ensure that the Proposed Action has the greatest likelihood to restore fish habitat that will contribute to the greatest possible benefit to the river's fishery. In this instance, the Proposed Action has failed to meet this criterion, and does not satisfy the Tribal Trust obligations of the Federal Government.

a.

As stated in the cover letter for the EA/Draft EIR:

"Physical channel rehabilitation is identified in the ROD as a necessary step towards recovery of the Trinity River's anadromous fishery and fulfillment of the federal government's tribal trust responsibility. The purpose of the proposed Lewiston-Dark Gulch rehabilitation project is to provide increased juvenile salmonid and rearing habitat on the mainstem Trinity River."

The Proposed Action falls short on several accounts. First, the Goal of the Program is to restore and sustain natural production of anadromous fish populations downstream of Lewiston Dam to pre-dam levels, and to provide "increased juvenile salmonid and rearing habitat". The Proposed Alternative falls far short of achieving the Program Goal. In other words, an incrementally small "increase" in habitat is insufficient; a more aggressive approach was intended in the ROD, and must be implemented wherever feasible. To illustrate that point, the Lewiston sites, and to a lesser degree the Dark Gulch site, implements a strategy that is substantially less than that called for in the Trinity

b



PACIFIC LAMPREY



STEELHEAD



GREEN STURGEON



River Flow Evaluation Final Report (TRFEFR), ROD, and Coarse Sediment Management Plan (CSMP). The Proposed Actions fail to take full advantage each sites' potential to maximize fishery recovery. Therefore, the Proposed Action will provide less juvenile salmonid and rearing habitat than is physically and ecologically possible, leaving the government's Tribal Trust responsibility unfulfilled.

b.

In **Section 1-10 Preparers of the EA/Draft EIR** (pg. 1-21), the document notes,

"Representatives of the TMC and their technical representatives provided support to the lead and cooperating agencies throughout this process."

We have participated in the design process for these sites and provided written and oral comment. However, we do not support the final Proposed Action, as we have stated in our reasoning previously provided to the TRRP. Our rationale is as follows:

1. **The Proposed Action fails to optimize site potential to recover the Trinity River fishery**
2. **The Proposed Action provides less juvenile rearing and salmonid habitat than is physically and ecologically possible.**

In the EA/ Draft EIR, the description of the *Proposed Action* (pg. ES-10) includes the following:

"These activities [of the Proposed Action] are expected to eventually result in the development of point bars and floodplain habitat that do not presently exist." "...This rehabilitation of river function could result in the rapid development of a larger and more complex expanse of river and floodplain habitats."

c.

"In-channel and riverine activities incorporated into the Proposed Action are intended to increase the potential for the river to meander (migrate) out of the channel in which it has been confined by historic dredging activities and, more recently, by riparian berms."

In order to realize the described benefits of the Proposed Action, sufficient channel rehabilitation actions must occur. Specifically, ample coarse sediment must be supplied to the channel in the form of constructed point and skeletal bars and through direct injection during high flows. Active floodplain restoration must also be incorporated, including berm removal and tailings reclamation. As described in the following pages, we feel the Lewiston-Dark Gulch designs lack an adequate supply of coarse sediment and other design components critical for the required habitat improvements.

#### **Coarse sediment augmentation**

The Proposed Action for the Lewiston component of this project is acceptable as is. The volume of coarse sediment identified in the document is accurate and necessary, as described on **page ES-10**:

d.



“The in-channel activities would include the placement of approximately 51,630 cubic yards of coarse sediment into the Trinity River: 36,330 cubic yards at the Lewiston site and 15,300 cubic yards at the Dark Gulch site.”

We desire to confirm 51,630 cubic yards (or slightly more, as described in **Alternative 1, pg. ES-11**) is available for project construction. If the required yardage of coarse sediment is not anticipated to be available, the consequences of this deficiency should be more clearly described. It is the strong preference of the HVT that the full volume (51,630 cubic yards) of coarse sediment be available for construction in 2008.

Under *Tentative Schedule*, (pg. 2-35) it is noted:

“The schedule depends on funding and the availability of coarse sediment for in-river placement. If the availability of the coarse sediment or funding were to inhibit complete project implementation in 2008, in-channel gravel additions would be completed during summer (July 15-September 15) 2009 or 2010.”

It appears clear from recent correspondence with Program staff that there is a shortage of gravel relative to the 51,630 cubic yards described as necessary in the Proposed Action. Additional details are needed to describe the possible in-channel gravel additions that may be delayed until 2010. Does this include the possible delay of construction of bar features, or does this only pertain to coarse sediment inputs to the channel that are not associated with a specific hardscaped design feature? If bar features are to be impacted, additional details of the sequence of bar building should be provided in the Final EA/Final EIR. How will this possible delay affect future channel rehabilitation projects, some of which also requiring substantial coarse sediment augmentations, relative to a possible domino effect of a programmatic coarse sediment shortage (physical and/or fiscal)?

In the past, the TRRP has shown it can complete coarse sediment augmentation over multiple years, such as at the Hatchery site. If the amount of gravel (51,630 cubic yards) is more than can be placed in a single year, a multiple year augmentation schedule is needed. This needs to be detailed in the Final EA/Final EIR.

#### **Dark Gulch**

On **page ES-1**, the document states:

“The Proposed Action is designed to benefit anadromous salmonids and their habitat by developing a properly functioning, diverse floodplain and riverine habitat.”

This is a clear example of our concern. The lower portions of Dark Gulch afford substantial potential for large-scale gains in fish habitat; this area is among the few sites with such potential. A key design goal of the Proposed Action is to develop a properly functioning diverse floodplain, but floodplain restoration is not a meaningful component in the downstream portion of the design (the two meanders furthest downstream). This is

e.

f.



ironic given a very real opportunity for substantial floodplain restoration exists at this site. If fully restored, substantial riverine habitat benefits, especially to salmonids, should result. The design process required to assess the site potential has been short-circuited in favor of a lower-cost and faster approach.

A more comprehensive design is needed for the Dark Gulch component of this project. Given the limitations of funding for TRRP construction activities, failure to properly design the project at this point in time will virtually preclude the harnessing of site potential at a later date. The TRRP budgeting process has not included funding for redesigning or reconstructing Lewiston or Dark Gulch sites beyond the Proposed Action described in this document.

The site provides tremendous opportunity as a long-term coarse sediment source for the coarse sediment management portion of the TRFEFR, as mandated under the ROD and recommended in the CSMP. The process of extracting coarse sediment for placement within the Dark Gulch project site or elsewhere in the upper river could be done in a way that considers long-term options for side channels, floodplain reclamation, and coarse sediment augmentation. This type of approach (restoring a coarse sediment “borrow site” while placing coarse sediment at other locations) has been successful and cost-effective on Clear Creek and the Tuolumne River, and the Dark Gulch site appears ideally suited for a similar approach. Properly designed (at a large scale) the TRRP can build Dark Gulch projects apace with progress of the coarse sediment augmentation program.

[The large-scale floodplain and side channel excavation at R-3 DG (Alternative 1) is more consistent with the overall vision required for the two downstream meanders of the Dark Gulch site. The document provides no analysis as to why feature R-3 DG (side channel and floodplain restoration) was not incorporated into the Proposed Action. Also, neither alternative considers the full potential of the meander upstream containing floodplain feature R-1 (immediately upstream of the R-3 DG meander). Instead, the meander has been designated a disposal area, serving no apparent ecological purpose. The current design for this area leaves the current meander wavelength of the river unchanged][The document fails to provide analysis indicating why one should expect to see shifts in meander wavelength in this reach—a fundamental goal of this Program.

The document contrasts two alternatives but does not explain *why* one alternative was selected over the other. Technical analysis to this end is essential to decision making. This technical analysis is currently missing from the document and should be incorporated into the Final EA/Final EIR][We understand that a temporary bridge would likely be needed downstream of the R-3 DG meander. If so, we support construction of a temporary bridge to enable the restoration of this floodplain.]

HVT feels the R-3 DG Alternative 1 design component should be incorporated into the Proposed Action or the Program must provide technical analysis demonstrating why this feature will not better enable the achievement of the **Project Objectives and Activities**, listed in **Section 2.6** (pg. 2-11 and 2-12), **Goals and Objectives of the Proposed Action** (pg. ES-5), and **Tribal Trust** responsibilities listed in **Section 3.10** (page 3.10-1).

f.

g.

h.

i.

j.

k.



Similar analysis must be provided for the difference in excavation in the Proposed Action (190,600 cubic yards) versus Alternative 1 (87,000 cubic yards). The Program also needs to justify the absence of a design (in either alternative) for the R-1 meander that optimizes fish habitat at that location. The stated purpose of this project is to provide increased juvenile rearing salmonid and rearing habitat in the mainstem Trinity River. We believe the omitted side channel/floodplain feature R-3 DG and R-1 meanders (currently missing from the Proposed Action) would provide substantially greater increases in salmonid habitat to this end. Given fish habitat sufficient to support natural production goals is the basis for the rehabilitation effort, these project elements must be fully analyzed.

k.

#### *Last Minute Design Alterations*

Significant design alterations discussed at the Program's December 20, 2007 Interdisciplinary Team Meeting need to be detailed and analyzed in the Final EA/Final EIR. These changes result largely from the recommendations of the *Value Engineering Final Report* (October 26, 2007). Recommended design revisions stemming from this report were distributed to Program Partners, ourselves included, on December 18, 2007 (*after* the release of the EA/Draft EIR and *only two days* before the Interdisciplinary Team Meeting, leaving little time for review). Revisions to the design included in this EA/Draft EIR requiring additional detail and/or analysis include:

- Value Engineering Study Proposal 2 – Limit Floodplain Construction in Area R-1 (Dark Gulch)

The Program has proposed limiting excavation in Area R-1 (Dark Gulch) to save money by leaving unexcavated materials in place. We do not support this proposal as presented in the revised designs by the Program. Currently, the contours indicate the islands will be approximately three feet in height. This will not resemble any natural surface on the Trinity River, nor has information been provided as to *how* this floodplain will *function*, other than simple inundation at 6,000 cfs. The floodplain objectives at R-1 are not clear. We should pause to first monitor the other floodplains we have constructed (Hocker Flat, etc) and evaluate their overall performance. While we understand the Program is maintaining the proposed islands will create additional edge habitat, we have not been made aware that fry habitat is limited at and near flows of 6,000 cfs.

l.

- Value Engineering Study Proposal 4 – Concentrate Coarse Sediment Augmentations  
This proposal impacts both the Lewiston and Dark Gulch sites. We do not support this proposal, or the reduction in bars being built as a result. As agreed upon in the TRFEFR, ROD, and CSMP, we need to implement coarse sediment augmentations to the river as directed by these documents. This proposal is not consistent with the coarse sediment augmentation goals of this program, and effectively reduces the volume of coarse sediment being added through these designs. A scientific justification has not been provided. Furthermore, implementation of this proposal in the final design is at conflict with the Program's own statement of the amount of coarse sediment required for the Proposed Action (51,630 cubic yards).



- Value Engineering Study Proposal 5 – Tree Deflectors for Bar Formation (Dark Gulch)

We do not support the action as proposed for implementation in the Dark Gulch site. Deflectors would be better suited further upstream, and implemented in a more habitat-oriented design. A similar experiment was conducted at Indian Creek in 2007. We feel it is important to first monitor the performance of the installation at Indian Creek before proceeding with this proposal. Additionally, along with Proposal 6 below, this action is not consistent with a more comprehensive design, which is needed for this meander.

- Value Engineering Study Proposal 6 – Slash Tree Roots at R-3 DG (Dark Gulch)

We do not support the implementation of this proposal at the specific location of R-3 DG, as we feel it will have a low likelihood of success based on our observations at other locations on the river. Benefits of this approach must first be confirmed through biological and geomorphic monitoring of the berm notching conducted at Vitzhum Gulch (Indian Creek, 2007).

- Value Engineering Study Proposal 7 – IC-8-CW Grade Control Reshape

We do not support reshaping this grade control. The Program has not demonstrated the benefits of implementing this design change. Absent a technical analysis, selection of this, or any alternative, is difficult to justify.

### **3. The Proposed Action does not fulfill the federal government's Tribal Trust responsibility**

In **Section 3.10 Tribal Trust** (pg. 3.10-1), the federal government's Tribal Trust responsibility is acknowledged. However, in **Section 3.10.2 Environmental Consequences/Impacts and Mitigation Measures** (pg. 3.10-8), the Tribal Trust responsibility is presented in terms of negative impacts to the fishery as a result of the channel rehabilitation effort at Lewiston and Dark Gulch. That is, if the construction does not negatively impact fish (e.g. through impacts to water quality), then the obligation is upheld. In fact, positive impacts to fish are required.

Positive impacts to fish are a trust duty resulting from the express directions of Congress in the CVPIA, § 3406(b)(23) "in order to meet federal trust responsibilities to protect the fishery resources of the Hoopa Valley Tribe, and to meet the fishery restoration goals of the Act of October 24, 1984." Congress placed upon the Secretary a federal trust responsibility to achieve positive outcomes for fish. The ROD quantifies that duty by stating: "The 1984 Act directed the Secretary to develop a management program to restore fish and wildlife populations in the Basin to levels approximating those that existed immediately before TRD construction began." *Id.* at 7. It is clear that to meet the federal trust responsibility to restore fish populations to such levels, while continuing to export to the CVP over 50% of the Trinity River's average runoff at Lewiston, full advantage must be taken of potential habitat found in these restoration areas. The CVPIA gives the federal government the responsibility to restore tribal trust resources lost as a result of the TRD. The CVPIA thus establishes an additional "fiduciary relationship and define[s] the contours of the United States' fiduciary responsibilities." *United States v.*



*Mitchell*, 463 U.S. 206, 224 (1983). These duties go beyond the rule that reserved fisheries must not be harmed.

It is a primary purpose of this project to restore the fishery of the Trinity River to help meet the Tribal Trust responsibility of the federal government. We do not believe implementation of the Proposed Action will optimize the maximum beneficial results to salmonid habitat or geomorphic processes to restore physical and biological the function of the river. Ultimately, we expect the implementation of this channel rehabilitation action, combined with other management actions, will cumulatively result in the achievement of the spawner escapement goals listed in **Tables 3.6-1 and 3.6-2** (pg. 3.6-2 and 3.6-5) and other numeric measurements that provide evidence of a restored fishery.

m.

#### 4. Additional comments

##### *Berm excavation and root re-growth*

Over the past month, riparian monitoring of recently constructed channel rehabilitation sites (Hocker Flat, Valdor Gulch, and others) has provided strong evidence that root re-growth along the channel margins may cause failure of these sites soon after they are constructed due to insufficient removal of willow root material from the riparian berm. On **page ES-25**, construction specifications call for ripping to 18 inches in depth. We feel this specification is likely to be ineffective in preventing site failure via re-growth, and requests that the TRRP evaluate whether this specification alone will alleviate the occurrence of root re-growth at these sites, or develop different and/or additional construction specifications to alleviate this failure risk.

n.

##### *Insufficient monitoring details*

On page ES-5, **Goals and Objectives of the Proposed Action**, it is stated,

“Evaluate the biological response (aquatic, riparian, upland) to changes in the physical environment and incorporates this information into the AEAM Program.”

However, we note a monitoring plan for this evaluation is not included. Additional details relative to the evaluation of these sites should be included in the Final EA/Final EIR.

In addition, we see no evidence that the limited monitoring of the biological response of recently constructed sites at Hocker Flat and Canyon Creek are being incorporated into the AEAM program. The lack of monitoring of constructed sites is preventing learning from informing future designs, thus AEAM is not being implemented, resulting in continued construction methods that may end in additional site failures. We believe that a well established monitoring and AEAM program is necessary to increase assurances of meeting Tribal Trust obligations.

o.

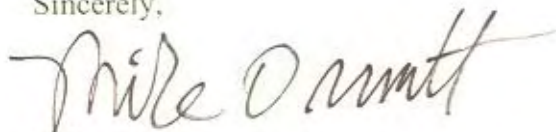
The document does include a **Section 4.5 Mitigation Monitoring Program for CEQA-Mandated Mitigation**. This section refers to **Appendix A: Mitigation Monitoring and Reporting Program**. The document is a mere recitation of the combined mitigation measures compiled throughout the EA/Draft EIR and requires only a date and initial to be placed alongside each mitigation action, once completed. There is no evaluation of the

adequacy, success, or failure of these mitigation measures. The monitoring to occur in Appendix A is the only monitoring described in the document and has little, in any, value for AEAM purposes.

0.

Thank you for taking the time to review these comments. The restoration of the Trinity River fishery is of utmost importance to us, and we look forward to our continued involvement in this program for the betterment of this fundamental resource.

Sincerely,

A handwritten signature in black ink that reads "Mike Orcutt". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Mike Orcutt

Director, Hoopa Valley Tribal Fisheries Department

***Response to Comment Letter 4***

This comment letter contains 15 comments. Following are the responses to these comments.

**Comment 4-a**

The EA/Draft EIR does not select for implementation any of the analyzed alternatives. In accordance with the requirements of NEPA and CEQA, the EA/Draft EIR identifies an adequate range of alternatives, analyzes potential impacts from implementation of those alternatives, and prescribes mitigation measures, as necessary, to minimize impacts. The document discloses information for use by decision makers as they decide which project should be implemented. Responsible officials of the lead agencies, in coordination with the Trinity Management Council (TMC), will make the final management decision as to which of these alternatives, or a blend of their individual components, is selected for implementation. If the final decision is made to implement the Proposed Action, there is nothing that precludes decision makers from incorporating elements of Alternative 1 in a future decision making process. Optimization of a site's potential for fish habitat, while an important objective, is not a statutory requirement at the project level and must be balanced with other factors.

**Comment 4-b**

The commenter correctly points out that the goal of the 2000 ROD is to restore and sustain natural production of anadromous fish populations downstream of Lewiston Dam to pre-dam levels. There is no clear objective answer, however, as to which alternative has the greatest potential for restoring and sustaining Trinity River fish habitat. The decision for action must be based upon the best available science and professional judgment. Selection of the Proposed Action in combination with implementation of other components of the ROD (e.g., releasing ROD flows, fine and coarse sediment management, watershed restoration, and implementation of an Adaptive Environmental Assessment and Management Program) will clearly advance the TRRP toward accomplishing program goals.

However, it is important to note that the ROD describes implementation of 44 channel rehabilitation sites and three side channels in order to quickly “remove the handcuffs” of encroaching vegetation to allow the river to create and maintain complex habitat in a self-sustained fashion. These channel rehabilitation sites were originally defined in the Trinity River Flow Evaluation Final Report (TRFEFR) and later illustrated as Figure 2-4 in the Trinity River Mainstem Fishery EIS/DEIR. Discussion on page 2-4 of the EA/Draft EIR describes these sites relative to the Lewiston–Dark Gulch site boundaries. Specifically, ROD sites in the Lewiston area consisted of three relatively small bank rehabilitation sites and one alternate bar and bank rehabilitation site. Dark Gulch sites specified in the ROD consisted of four discrete areas for a bank rehabilitation site, a location for creating alternate bars and bank rehabilitation, a side channel (where the R-4 DG side channel is planned), and another alternating bar sequence at the IC-8 DG site. The activity areas incorporated into both the Proposed Action and Alternative 1 are substantially larger than the areas originally described in the TRFER and the ROD. The information provided in Chapter 2 of the EA/Draft EIR does not support the statement by the commenter that “... the Lewiston sites, and to a lesser degree the Dark Gulch site, implements a strategy that is substantially less than that called for in the TRFEFR, ROD, and Coarse Sediment Management Plan (CSMP).”



**Comment 4-c**

Comment noted. Refer to responses to comments a, b, and d.

**Comment 4-d**

Wording in the EA/Final EIR will be changed to clarify the intent. The word “approximately” will be replaced with “up to” so that in-channel activities would include the placement of “up to” 53,430 cubic yards of coarse sediment into the Trinity River, consisting of “up to” 38,130 cubic yards at the Lewiston site and “up to” 15,300 cubic yards at the Dark Gulch site. These revisions and other explanations concerning in-channel activity areas and coarse sediment addition will be clarified in the revisions shown in Chapter 3 (i.e., (Activity I – Coarse Sediment Addition)).

**Comment 4-e**

The EA/Draft EIR was written to represent the maximum volume of coarse sediment that could be available or physically added to the river in this reach. The TRRP does not have 52,000 cubic yards of coarse sediment available for this project in 2008; furthermore, the best available information (Dave Gaeuman, TRRP fluvial geomorphologist, pers. comm.) now indicates that the appropriate amount of coarse sediment to add to the Trinity River each year is approximately 7,000–10,000 cubic yards. Consequently, the TRRP now plans to place an average of 7,000–10,000 cubic yards of coarse sediment into the Trinity River annually at locations within the site boundaries, or at other locations that have been evaluated, and as recommended by the best available science (see page 2-12 of the EA/Draft EIR). If coarse sediment placement is extended over multiple years, the environmental impacts that would potentially result from concurrent placements would be reduced. Thus, analysis of timing beyond that already analyzed in the EA/Draft EIR is not required.

**Comment 4-f**

Comment noted. Refer to responses to comments a, b, and d.

**Comment 4-g**

Comment noted. Refer to responses to comments a, b, and d.

**Comment 4-h**

Comment noted. Refer to responses to comments a, b, and d.

**Comment 4-i**

Comment noted. Refer to responses to comments a, b, and d.

**Comment 4-j**

The bridge included in Alternative 1 (X-3 in Figure 2.3c) would be a permanent bridge to provide the private landowner access to his property over the low-flow side channel proposed at activity area R-3 DG.

**Comment 4-k**

The quantities of excavation in the commenter's letter are reversed. The Proposed Action includes excavation of approximately 87,000 cubic yards, and Alternative 1 includes excavation of approximately 190,600 cubic yards.

The TRRP and cooperators developed the range of alternatives included in the EA/Draft EIR. As required by NEPA and CEQA, the EA/Draft EIR has identified, analyzed, and suggested mitigation measures to reduce potential impacts from implementation (refer to response to comment b). The decision as to which alternative is selected for implementation is a management decision and beyond the scope of this document (refer to response to comment a).

**Comment 4-l**

These "last minute design alterations" are within the scope of the EA/Draft EIR. Value Engineering (VE) recommendations are adequately analyzed under the present EA/Draft EIR impact analyses. The impacts of full project implementation encompass impacts from project revisions recommended by the VE study. Consequently, the opportunity exists for the Responsible Official to refine the chosen project based on VE study recommendations, under the decision making processes governing the TRRP.

**Comment 4-m**

Comment acknowledged. Page 3.10-10 notes that any short-term impacts analyzed in the EA/Draft EIR would be outweighed by the overall benefits to tribal trust assets through implementation of the TRRP. Implementation of either action alternative would have long-term positive impacts on Trinity River fish populations. Also see response to comment a.

**Comment 4-n**

The commenter refers to ripping of the floodplain on page 25 of the Executive Summary. The objective of ripping to 18-inch depths is for geomorphic purposes and to prevent stormwater from reaching the Trinity River during construction rather than for vegetation removal. Vegetation removal is described on page 2-18 of the EA/Draft EIR. The issue of regrowth of unwanted riparian vegetation is currently being discussed by the TRRP and its cooperators, and measures to address this issue could be considered as the designs are finalized.

**Comment 4-o**

The environmental document has been written to meet NEPA and CEQA objectives and requirements. Thus, the monitoring and mitigation measures included in the Mitigation Monitoring and Reporting Program (MMRP) are meant solely to ensure that mitigation measures are implemented to mitigate project impacts to a less-than-significant level. See page 4-19 of the EA/Draft EIR for a thorough discussion of this topic.

TRRP staff and cooperators support implementation of monitoring to evaluate the success of implemented projects at increasing juvenile fish rearing habitat and other objectives enumerated on page 1-14 of the EA/Draft EIR. An Integrated Assessment Plan (IAP) is currently being developed by members of the TMC,

including the representatives of the Hoopa Valley Tribe. The IAP is intended to identify procedures to accomplish the necessary monitoring.



State of California - The Resources Agency  
DEPARTMENT OF FISH AND GAME  
<http://www.dfg.ca.gov>

ARNOLD SCHWARZENEGGER, Governor

NORTHERN REGION  
801 Locust Street  
Redding, CA 96001  
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December 28, 2007

Mr. Patrick Frost  
Trinity County Resource Conservation District  
Post Office Box 1450  
Weaverville, California 96093-1450

Mr. Douglas P. Schleusner, Executive Director  
Trinity River Restoration Program  
Post Office Box 1300  
Weaverville, California 96093-1300

Dear Messrs. Frost and Schleusner:

**Lewiston-Dark Gulch Rehabilitation Sites: Trinity River Miles 105.4-111.7  
Environmental Assessment/Draft Environmental Impact Report (EA/DEIR)**

The Department of Fish and Game (DFG) has reviewed the subject EA/DEIR. The document examines the environmental issues, alternatives and impacts associated with proposed mechanical channel rehabilitation activities on the Trinity River at the Lewiston and Dark Gulch sites near the town of Lewiston, California. The project will be implemented by the Trinity River Restoration Program (Reclamation), a program of the Department of Interior, Bureau of Reclamation. The proposed action will benefit anadromous fish and their habitat by developing a properly functioning and diverse flood plain and main river channel habitat through channel modifications and addition of spawning gravel. DFG offers the following comments in our roles both as trustee agency and as a responsible agency under the California Environmental Quality Act (CEQA).

DFG concurs with the selection of the Proposed Action. We believe the projects will have positive benefits toward restoration of salmon and steelhead habitat by reconnecting the river to its historical flood plain and enhancing spawning and rearing habitat for salmonids.

a.

**Section 3.6 Fisheries**

The discussion on page 2 of Section 3.6 states that the relatively low returns of naturally produced fish compared to hatchery-reared fish indicate a lower survival rate of early freshwater life stages (i.e., eggs, fry, and/or juvenile fish) for naturally rearing fish. It further concludes from this that the quality or availability of rearing habitat is limiting the population. DFG questions whether this conclusion can be

b.

*Conserving California's Wildlife Since 1870*





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drawn from the information cited. Although we concur that rearing habitat is severely limited in these project reaches and that these limitations adversely affect natural survival rates of naturally produced fish, we doubt that such inferences can reasonably be made based on the evidence of higher survival for hatchery fish. The reason hatchery fish have a much higher survival in their preadult life stages is because they are protected, fed and cared for in a controlled environment with an artificial carrying capacity as compared to naturally reproducing fish which are subject to annual variations in carrying capacity and environmental conditions. Hatcheries remove most of the early life history threats to spawning success, egg survival and growth to juvenile stage. Conclusions regarding the quality of riverine anadromous habitat cannot reasonably be made based on early life history survival differences of hatchery and natural fish.

b.

The discussion on page 5 of Section 3.6 states that predam escapement estimates for fall-run Chinook salmon adults in the Trinity River prior to 1964 above the North Fork ranged from 19,000 to 75,600 and averaged 45,600 for the 5 years of available data. It should be noted that, according to the Trinity River Flow Evaluation final report (appendix D), no distinction was made in most years between spring-run and fall-run Chinook estimates. Thus these estimates likely included both spring-run and fall-run fish.

c.

The discussion on page 28 of Section 3.6 outlines the process for obtaining a Consistency Determination from DFG pursuant to Section 2080.1 of the Fish and Game Code (Code) (California Endangered Species Act (CESA)). The 2000 Biological Opinion and Incidental Take Statement issued by the National Marine Fisheries Service will provide compliance with Section 7 of the Federal Endangered Species Act for the projects. Since take of coho salmon (*Oncorhynchus kisutch*) may result from the manual injection of spawning sized gravel proposed by the project, and coho salmon are listed as threatened by the State Fish and Game Commission, an Incidental Take Permit, or in the alternate, a Consistency Determination pursuant to CESA will be necessary. The discussion should also explain that compliance with Sections 2080.1 and 2081 of CESA will require that the impacts of the projects on coho salmon will be minimized and fully mitigated. DFG recommends that a full and separate discussion of the mitigation measures which will serve to minimize and fully mitigate impacts to coho salmon be added to Section 3.6 to facilitate the documentation necessary to justify a Consistency Determination.

d.

A thorough discussion of mitigation for impacts to spawning anadromous fish is necessary. Mitigation Measure 3.6-1a proposes that surveys for active redds and potential spawning habitat 200 feet upstream and downstream of the proposed in-river construction sites will be made if in-river work activities will be conducted outside of the late-summer, low-flow period, defined as July 15 to September 15. The proposed mitigation is incomplete as it does not describe what measures will be

e.



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employed should redds and potential spawning habitat be identified by the surveys. The proposed mitigation does not outline any actions which will mitigate potential impacts to spawning or incubating anadromous fish in each project reach. Potential impacts may include disturbance of spawning pairs of fish, percussive impacts to incubating eggs, and mortality through compression (crushing) of eggs and alevins. Work within the active stream channel must be avoided in areas where spawning is documented, or work needs to occur outside of the anadromous fish spawning and incubation time period, defined as September 15 to July 15.

e.

Additionally, statements on pages 37 and 45 of Section 3.6 are inconsistent with Mitigation Measure 3.6-1a. The discussion on pages 37 and 45 state that all in-river work will avoid the summer low flow period (July 15 to September 15), while Mitigation Measure 3.6-1a states that if work is conducted during this period, surveys will first be done.

f.

### Section 3.7 Vegetation, Wildlife and Wetlands

Table 3.7-6 summarizes areas of disturbance to jurisdictional waters, including riparian wetlands. The data in this table are not consistent with the data illustrated on Figures 3.7-4 a, b and c, which show spatial impacts to riparian wetlands. Furthermore, the impact areas illustrated on the figures appear to conflict with the acreages listed on those figures. Thus it is unclear what the projects' impacts to riparian wetlands will be.

g.

The document states there is a potential for temporary or permanent loss of riparian vegetation (Impact 3.7-1). DFG believes a minimum of 1:1 replacement of all riparian and wetland habitats permanently impacted by the project should be accomplished. This can occur through a combination of natural recruitment and active revegetation. Consistent with our recommendations on previous Reclamation projects, DFG continues to support the development of a Riparian Revegetation and Monitoring Plan (Plan). The implementation of this Plan was required as mitigation for previous Reclamation projects which have since been constructed. Consequently, the EA/DEIR should explicitly state that completion and implementation of the Plan will take place as soon as possible and independently of the construction of the proposed projects.

h.

Mitigation Measures 3.7-1b and c both call for creation of the Plan. However, the specific language addressing the contents of the Plan and the manner in which it will be implemented are not consistent between these mitigation measures. DFG notes that Mitigation Measure 1c includes extensive preliminary discussion which should not be included in the measure itself. This discussion should be relocated to the impact discussion. DFG further notes that Mitigation Measure 1c calls for the Plan to be implemented after the first growing season following construction, while

i.



**5**

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Mitigation Measure 1b lacks this requirement. Thus it is unclear when the Plan will be implemented for these projects relative to other ongoing Reclamation restoration projects, past and future. The Mitigation Measure should specify that the Plan will apply to each restoration project for a period of 5 years after the end of the growing season following actions which remove riparian vegetation. Finally, DFG recommends the wetland delineation called for within Mitigation Measure 1c should be listed as a separate mitigation measure.

i.

Mitigation Measure 3.7-4a provides that potential impacts to little willow flycatcher (*Empidonax traillii brewsteri*) will be avoided or minimized if construction is scheduled to avoid the June 15 to July 31 nesting season. As previously stated in our comments on the Canyon Creek Suite Rehabilitation Project (letter dated March 24, 2006), and on the Indian Creek Rehabilitation Project (letter dated September 14, 2006), the nesting avoidance period should be June 1 to July 31.

j.

Please note that, when filing a Notice of Determination in conformance with Public Resources Code Section 21152, environmental filing fees will be payable pursuant to Fish and Game Code Section 711.4 because the project will have an effect on fish and wildlife resources due to habitat alterations.

k.

Thank you for the opportunity to comment on the EA/DEIR. If you have any questions regarding our comments, please contact Staff Environmental Scientist Bruce Webb at (530) 225-2675.

Sincerely,

  
GARY B. STACEY  
Regional Manager

cc: State Clearinghouse  
Post Office Box 3044  
Sacramento, California 95812-3044

Mr. Bruce Webb and Dr. Richard Lis  
California Department of Fish and Game  
601 Locust Street  
Redding, California 96001

ec: Messrs. Mark Stopher, Larry Hanson, Eric Haney, Mike Berry, Wade Sinnen  
and James Thompson; Ms. Donna Cobb

***Response to Comment Letter 5***

This comment letter contains 11 comments. Following are the responses to these comments.

**Comment 5-a**

The commenter supports the selection of the Proposed Action.

**Comment 5-b**

The commenter suggests that information on Page 3.6-2 of the EA/Draft EIR is conclusionary. The language in the referenced paragraph was based on information provided in the Draft EIS/EIR, Appendix B, page B-4. This sentence will be modified to include a reference to this document.

**Comment 5-c**

The commenter suggests that the Chinook salmon escapement estimates presented on page 3.6-5 of the EA/Draft EIR did not differentiate between spring-run and fall-run Chinook pre-dam escapement. These values were summarized from information available in the Draft EIS/EIR, Appendix B, page B-4. The referenced text in the EA/Draft EIR will be modified to include the appropriate citation.

**Comment 5-d**

The lead agencies acknowledge that the discussion of the process described to meet the requirements of a consistency determination from CDFG requires minor editorial changes consistent with the language offered by the commenter. Changes to page 3.6-28 of the EA/Draft EIR will be incorporated and will include a reference to an appendix that will provide a discussion of the mitigation measures for coho salmon in a format that facilitates CDFG responsibilities under the California Endangered Species Act.

**Comment 5-e**

The lead agencies acknowledge that mitigation measure 3.6-1 does not fully address the potential impacts to coho salmon and other anadromous salmonids with respect to the introduction of coarse sediment. This mitigation measure will be revised to differentiate between in-channel activities proposed during the low-flow period (e.g., grade control removal and coarse sediment placement at in-river bars) and gravel injection (during high-flow controlled releases).

The lead agencies acknowledge CDFG's concern for impacts to spawners, their redds, and progeny. To the maximum extent possible, Reclamation will ensure that all in-river construction activities are conducted during late-summer low-flow conditions (e.g., July 15–September 15). However, placement of gravel into the river during peak ROD flows is planned in several locations. High flow gravel placement will occur during peak ROD flows (approximately May 1 to May 31, depending on water year type). The timing of these ROD flows was chosen to emulate that of a natural snow melt hydrograph with an objective of supporting geomorphic processes (e.g., mobilization of the river bed and transport of fine sediment). Sediment studies conducted by the TRRP indicate that at these peak ROD flows, considerable sediment transport (both fine and coarse) is occurring. The timing of these flows was chosen based on the low likelihood of fish still being in the gravels at the time. Because of the large amount of gravel already in the Lewiston reach, it is expected



that impacts from additional gravel transport will be no more than the impacts that would have already occurred without additional gravel placement.

**Comment 5-f**

The lead agencies acknowledge an inconsistency between the text on page 3.6-37 and 3.6-45. Relevant text, including Mitigation Measure 3.6-1a, will be revised to clarify the type and timing of in-channel activities proposed, including those restricted to the summer low-flow period.

**Comment 5-g**

The lead agencies acknowledge that there is inconsistency between Table 3.7-6 and Figures 3.7-4 a, b and c. Subsequent to issuance of the EA/Draft EIR, the U.S. Army Corp of Engineers (USACE) verified the wetland delineation prepared for the Lewiston–Dark Gulch sites. The verification requires minor revisions to sections of the EA/Draft EIR with respect to jurisdictional features. These revisions are provided in Chapter 3 of this EA/Final EIR.

**Comment 5-h**

The lead agencies acknowledge this comment. Mitigation measures that address Impact 3.7-1 will be prefaced with the statement that a Riparian Revegetation and Monitoring Plan (Plan) is currently under development and initial elements of the plan have been implemented at the Hocker Flat, Canyon Creek, and Indian Creek Channel Rehabilitation Sites.

**Comment 5-i**

The lead agencies acknowledge the need to clarify mitigation measure 3.7-1 and to ensure that this mitigation measure is internally consistent. This mitigation measure will be revised in response to this comment.

**Comment 5-j**

The commenter is correct. The mitigation measure related to the little willow flycatcher will be modified to reflect the accurate nesting avoidance period (June 1 to July 31).

**Comment 5-k**

The CEQA lead agency acknowledges the requirement related to environmental filing fees pursuant to Fish and Game Code Section 711.4. When a Notice of Determination is filed with the State Clearinghouse for the project, the appropriate filing fee will be included.

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## **Changes to the EA/Draft EIR**

## ***Changes to the EA/Draft EIR***

### ***3.1 Introduction***

Several changes to the text of the EA/Draft EIR, have been identified in the responses to comments provided in Chapter 2. Modifications made to the EA/Final EIR in response to comment letters are shown in Section 3.2 with strikeout (deletions) and underline (additions) revision marks to clearly define the changes. Additional changes to correct minor errors and omissions are shown with strikeout and underline revision marks in Section 3.3. Changes in tables are shown as shaded and italicized. Revised figures are included at the end of this chapter. None of the changes constitutes new significant information or results in new significant impacts.

### ***3.2 Changes to the EA/Draft EIR in Response to Comment Letters***

#### ***Chapter 1***

No changes have been made to this chapter.

#### ***Chapter 2***

*Page 2-18 of the EA/Draft EIR has been revised as follows to acknowledge the importance of stakeholder coordination during project planning and implementation:*

##### ***Vegetation Removal***

- The TRRP will coordinate with stakeholders prior to implementing site-specific vegetation removal activities.
- Clear rights-of-way required to access work areas and the work areas themselves using a combination of manual labor and heavy equipment (i.e., chainsaw, excavator, and bulldozer).
- Remove the majority of stumps, roots, and vegetative matter to allow river scour on lowered floodplain surfaces. Some LWD is planned for use in the floodplain to serve as habitat for juvenile salmonids.
- Cleared and grubbed vegetation may be disposed of by burying within spoils areas, chipping, hauling offsite, burning, or other appropriate methods. Large wood from the site may be reserved for use as structure within the project areas. On lands managed by the STNF at the Lewiston site, vegetative material (excluding large wood) would be chipped or buried within authorized activity areas.
- Preserve and protect vegetation designated for preservation within clearing limits and vegetation outside clearing limits.
- Mechanically remove submerged roots from river fringe areas by using ripping bars set to about 16 inches deep or with excavator bucket. Equipment bodies (tires, tracks) would remain outside of the river when removing submerged roots.

*Page 2-20 of the EA/Draft EIR has been revised as follows to clarify that the volume of coarse sediment described in the Proposed Action is a maximum amount:*

Figures 2-2a, 2-2b, and 2-2c illustrate activities included in the Proposed Action. The Proposed Action includes a number of in-channel activities at both the Lewiston and Dark Gulch sites as well as several river crossings within the boundary of the Dark Gulch site. The in-channel activities would include the placement of up to approximately 53,430 cubic yards of coarse sediment into the Trinity River: up to 38,130 cubic yards at the Lewiston site and up to 15,300 cubic yards at the Dark Gulch site. The riverine activities would result in the excavation of approximately 87,000 cubic yards of alluvial material: 38,100 cubic yards at the Lewiston site and 48,900 yards at the Dark Gulch site. As much as ~~About~~ 84,600 cubic yards would be placed at various upland locations within the project sites. Riverine activities on both sides of the Trinity River would use adjacent upland and staging areas to dispose of and/or stockpile excavated or processed materials within the boundaries of the two sites. These sites include public and private lands within a narrow corridor parallel to the river.

*Page 2-29 of the EA/Draft EIR has been revised as follows to provide additional information on the hydraulic modeling used to assess the potential impacts of coarse sediment addition to the Trinity River:*

The design of the activity areas was based on an understanding of the relationships between the flow regime and the hydrologic/hydraulic characteristics of the action alternatives. A fundamental constraint was to *do nothing to increase the flood risk in the general vicinity, and to not raise the water surface elevation above the current FEMA estimated 100-yearbase flood elevation*. Evaluation of the action alternatives will require comparing estimated seasonal base flows and estimated return-period flows. USACE's Hydraulic Engineering Center River Analysis System (HEC-RAS) hydraulic model will be used by the design team during final design activities to predict changes in flood elevations at various points along the project reach. As the project designs are finalized, this model will quantitatively evaluate the effect of planned coarse sediment additions on water surface elevations at specific locations within the IC activity areas and throughout the project reach. Table 2-4 lists the components of the flow regime, the seasonal or other periodic return intervals, and the flow rates that would be used during final design to ensure that the action alternatives meet the flood constraints described above.

*Page 2-35 of the EA/Draft EIR has been revised as follows to clarify that the schedule for coarse sediment augmentation will be adjusted based on final project design needs and availability of material:*

The total construction time for the project is anticipated to be approximately 140 days between March 1, 2008, and December 31, 2008. However, the schedule depends on funding, availability of coarse sediment for in-river placement, and final decisions concerning the appropriate amount to add at each location. If the volume of availability of coarse sediment available to the TRRP is limited or funding were to inhibit complete project implementation in 2008, in-channel gravel additions recommended by TRRP staff would be completed during low-flow conditions in subsequent years. ~~summer (July 15–September 15) 2009 or 2010.~~ Work in the spring would include placement of gravel at the IC-3 SO and IC-13 FG activity areas and removal of vegetation as necessary to gain river access and so that high spring flows might assist in scouring and creating habitat. Consequently, there may be a break in construction during high spring (May–June) flows. Revegetation would take place in the wet season (fall/winter) following construction. It is expected

that annual spring additions of coarse sediment at sites IC-3 SO and IC-13 FG will continue indefinitely during peak annual releases from Lewiston dam. Addition of gravel during high spring flows in subsequent years may also be conducted at sites IC-4 DC and IC-8 CW.

## Chapter 3

### Section 3.6

*Page 3.6-2 of the EA/Draft EIR has been revised as follows to include the relevant citation:*

In-river spawner escapement is the number of fish returning to spawning grounds, which consists of two subgroups: naturally produced fish and hatchery-produced fish. However, hatchery-produced fish are not considered to contribute toward the in-river spawner escapement goals of the TRRP, although their offspring do (i.e., if hatchery-produced fish spawn in-river and their offspring survive to return to spawn, these offspring are naturally produced by definition). The best available data indicate that large numbers of hatchery-produced fish spawn in-river. Typically, more fish spawn in-river than are spawned at the hatchery, and fewer emergent fry survive to return as adults. Assuming that hatchery- and naturally produced fish are subject to the same environmental conditions after the hatchery releases its fish (typically as smolts), the relatively low returns of naturally produced fish are indicative of lower survival rates of early fresh water life stages (i.e., eggs, fry, and/or juvenile fish) compared to hatchery-reared fish (U.S. Fish and Wildlife Service et al. 1999). This indicates that the quality or availability of rearing habitat is limiting the population.

*Page 3.6-28 of the EA/Draft EIR has been revised as follows to clarify the role of CDFG relative to the California Endangered Species Act (CESA):*

Project-related impacts to species listed as endangered or threatened under CESA would be considered significant. State-listed species are fully protected under the mandates of CESA. “Take” of protected species incidental to otherwise lawful management activities may be authorized under Section 2081 of the Fish and Game Code of California. Authorization from CDFG would be in the form of an Incidental Take Permit. For the Proposed Action, the TCRCD, as the CEQA lead agency, would need to obtain an incidental take permit if the activities described in this EA/Draft EIR could result in the take of a state-listed species (i.e., coho salmon). Under CESA, and upon concurrence from CDFG that the NMFS Biological Opinion and incidental take statement for “take” of listed SONCC ESU coho salmon are adequate (pursuant to CESA), the TCRCD may request a CESA Consistency Determination from the Director of the CDFG, pursuant to Section 2080.1 of the California Fish and Game Code. Within 30 days after receipt of the notification, the Director of the CDFG shall determine whether the federal incidental take statement is consistent with CESA. If it is determined to be consistent with CESA, no further authorization or approval is necessary under CESA. If the Director of the CDFG determines that the federal Incidental Take Statement is not consistent, then the TCRCD will be required to obtain a take permit pursuant to California Fish and Game Code Section 2081(b). Compliance with this section of the code also requires that the impacts of the project on coho salmon be minimized and fully mitigated. To facilitate CDFG’s CESA compliance process, Appendix 2 has been included in this EA/Final EIR. This appendix provides a full discussion of the mitigation measures specific to coho salmon.

*Page 3.6-37 of the EA/Draft EIR has been revised as follows to expand the discussion of impact statement 3.6-1:*

Effects on spawning habitat associated with construction of the Proposed Action are expected to be limited to short-term, localized sedimentation caused by settling of silt disturbed by bank-side excavation activities, the removal of existing grade control structures, and the addition of coarse sediment material including contouring and grading in the low-flow channel. Any salmon redds on or near the existing grade control structures or coarse sediment addition sites could be destroyed or disturbed by these construction activities. Silt suspended by these activities may be dispersed and re-settle on downstream suitable spawning areas near these construction areas. However, excavation of grade control structures would be conducted during late-summer (July 15-September 15) low-flow conditions, as authorized by NMFS and CDFG, to avoid impacts to spawning anadromous salmonids. The addition of coarse sediment at various IC activity areas would occur in conjunction with bar construction activities and could impact spawning anadromous fish (including coho salmon). If conducted outside the in-river late-summer work period, this activity may result in percussive impacts to incubating eggs and mortality through compression (crushing) of eggs and alevins. The addition of coarse sediment at various IC activity areas (e.g., IC-3 SO, IC-13 FG) would also occur during the channel maintenance flows released from the TRD during the spring. While the volume of material introduced to the channel may vary by water year type, the timing would be based on the transport capacity of the flows. Planned placement of coarse sediment during peak ROD flows, starting approximately May 1, is late enough to virtually eliminate detrimental effects on fish in the gravel. High flow placement is not expected to have additional adverse effects on redds or juvenile salmonids beyond those that already would have occurred from scour and sediment transport of gravels already in the mainstem Trinity River.

*Page 3.6-40 of the EA/Draft EIR has been revised as follows to clarify mitigation measure 3.6-1a:*

- 1a** The proposed construction schedule includes in-river work that could affect spawning spring- and fall-run Chinook salmon, coho salmon, and steelhead or their eggs once in the gravel. To the maximum extent possible, Reclamation will ensure that all in-river construction activities are conducted during late-summer, low-flow conditions (e.g., July 15–September 15). If in-river work activities will be conducted after September 15 (during spawning), work will be coordinated with biologists from NMFS and CDFG to ensure that impacts are minimized. ~~—, prior to the start of project construction, Reclamation or its contractor shall retain a qualified fisheries biologist to conduct a survey for active redds and potential spawning habitat 200 feet upstream and downstream of the proposed in-river construction activities if in-river work activities will be conducted outside of the late-summer, low-flow conditions (e.g., July 15–September 15).~~

*Page 3.6-45 of the EA/Draft EIR has been revised as follows to be consistent with previous discussions regarding the timing of in-channel activities:*

Erosion and deposition of fine sediments associated with implementation of the Proposed Action are expected to be localized and temporary. Some fine-textured materials may settle near or on known spawning habitats located downstream of riverine rehabilitation areas, but these materials are not expected to impair redd excavation or spawning. Initial Excavation, grading and coarse sediment addition at IC activity areas within the channel would occur only during low-flow conditions between July 15 and September 15, 2008,

minimizing the potential for adverse effects on all life stages of coho salmon. Addition of coarse sediment during spring channel maintenance flows would be initiated in spring 2008 and completed annually thereafter as required to maintain appropriate coarse sediment volumes in the reach as initial quantities are mobilized downstream. As proposed, high-flow coarse sediment injection would occur at activity areas IC-3 SO and IC-13 FG and possibly at IC-4 DC and IC-8 CW, depending on the site-specific conditions and the type of water year. Any juvenile coho salmon rearing in these activity areas during this timeframe could be temporarily displaced or their social behavior could be temporarily disrupted by an increase in turbidity. Behavioral disruption, even temporarily, could result in some increased vulnerability to competitive interactions or predation of juvenile coho salmon (Berg and Northcote 1985). These temporary impacts were anticipated and addressed in the 2000 Biological Opinion and associated incidental take statement for the ROD and amended BO for in-river work. While the Proposed Action is intended to increase aquatic habitat, the short-term impacts associated with construction activities would be considered significant.

### **Section 3.7**

*Page 3.7-45 of the EA/Draft EIR has been revised as follows to expand the discussion of impact 3.7-1 and to revise the tables and mitigation measures related to this impact statement:*

**Impact 3.7-1: Construction activities associated with the project could result in the loss of jurisdictional waters, including wetlands. No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1**

#### ***No-Action Alternative***

Under the No-Action Alternative, no loss of jurisdictional ~~waters~~ wetlands would occur because the project would not be constructed.

#### ***Proposed Action***

Floodplain values and functions will be enhanced by either the Proposed Action or Alternative 1 in conjunction with ROD flows released by the TRD. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to convert to riparian habitats (in some cases, jurisdictional wetlands), both seasonal and perennial, within a 3–5 year post-project window. The TRRP will take advantage of opportunities during or after project construction to enhance wetland functions within the project boundaries or to create conditions required for functional jurisdictional wetlands (i.e., hydrology, vegetation, and hydric soils) to persist over time. For example, excavation of areas upslope (beyond the 6,000 cfs OHWM line) to a depth coincident with medium- or low-flow (2000–450 cfs) conditions may provide opportunities to establish the hydrologic conditions necessary for establishing functional jurisdictional wetlands.

Construction activities associated with the Proposed Action would result in temporary impacts to jurisdictional waters, including wetland features, within the sites (Revised Figure 3.7-4 c). Revised Table 3.7-6 lists acres of jurisdictional waters that would be affected by the Proposed Action. Construction of the Proposed Action would result in a direct temporary impact to 28.55 ~~22.50~~ acres of jurisdictional waters. Temporary impacts to jurisdictional waters would be considered significant.

**Revised Table 3.7-6. Expected Maximum Areas of Disturbance to Jurisdictional Waters (revisions are shaded)**

JURISDICTIONAL WATER TYPE	APPROXIMATE AREA OF DISTURBANCE (ACRES)	
	PROPOSED ACTION	ALTERNATIVE 1
<b><i>Lewiston</i></b>		
Riparian wetland	1.256	1.256
Fresh emergent wetland	0.000	0.000
Trinity River (riverine)	15.870	19.796
Intermittent <del>stream</del> creek	0.002	0.005
Open water	0.000	0.000
Ephemeral drainage	0.004	0.004
<b>Lewiston Total</b>	<b>17.132</b>	<b>21.061</b>
<b><i>Dark Gulch</i></b>		
Riparian wetland	0.164	0.215
Fresh emergent wetland	0.000	0.001
Trinity River (riverine)	11.251	14.626
Intermittent <del>stream</del> creek	0.000	0.000
Open water	0.000	0.000
Ephemeral drainage	0.000	0.000
<b>Dark Gulch Total</b>	<b>11.415</b>	<b>14.842</b>

***Alternative 1***

Revised Table 3.7-6 lists acres of jurisdictional waters that would be affected by Alternative 1. Construction activities associated with Alternative 1 would result in a direct temporary impact to 35.90 ~~35.70~~ acres of jurisdictional waters (Revised Figure 3.7-5c). Temporary impacts to jurisdictional waters would be considered a significant impact.

***Mitigation Measures******No-Action Alternative***

Since no significant impact was identified, no mitigation is required.

***Significance after Mitigation***

N/A



***Proposed Action and Alternative 1***

In order to avoid and minimize impacts to jurisdictional wetlands, the following mitigation measures will be implemented:

- 1a** Prior to the start of construction activities, Reclamation shall retain a qualified biologist to identify potential construction access routes necessary for the project to ensure that these features avoid and/or minimize to the fullest extent impacts to jurisdictional waters. In addition, Reclamation shall clearly identify, and flag in the field, biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected, and will provide the contractor specific instructions to avoid any construction activity within these features. Reclamation shall inspect and maintain marked areas on a regular basis throughout the construction phase.
  
- 1b** Reclamation shall ~~revise develop the a~~ Draft Riparian Revegetation and Monitoring Plan, based on input from the USACE, Regional Water Board, and CDFG, prior to implementing the proposed project. Though implementation of the draft plan has begun (e.g., revegetation of 50 percent of the impacted areas has occurred), full plan adoption is required as a mitigation measure for previously constructed Reclamation channel rehabilitation projects. The revisions to this plan and subsequent implementation will take place as soon as possible and independent of the implementation of the Proposed Action. The plan shall include measures that ensure that all riparian vegetation (a key parameter of jurisdictional wetlands) removed by TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam is replaced by natural recruitment, replanting, regrowth, or any combination thereof at an areal ratio of 1:1 within a 5-year time frame. Because the present Trinity River channel is encroached (up to 300 percent) with riparian vegetation that is homogenous in nature, this plan need not require strict replacement based on original stem counts and species. The plan shall acknowledge that the ultimate goals of the TRRP include enhancement and maintenance of functional riparian habitat and no net-loss of jurisdictional wetlands throughout the 40-mile reach of the Trinity River below the TRD. Because riparian habitat and jurisdictional wetlands will respond to river restoration with some degree of spatial and temporal variability, areal habitat coverage within the 40-mile reach will remain relatively consistent while habitat changes at specific locations may be measurable.
  
- 1c** Reclamation shall initiate a 5-year mitigation monitoring program after the first growing season following project implementation. After a period of 3 years, the need for additional riparian habitat and wetland enhancement will be evaluated. At that time, Reclamation, in consultation with the USACE, Regional Water Board, and CDFG, will determine whether there is a need to further enhance or create additional areas of riparian habitat or jurisdictional wetlands within the project boundary so that there will be no net loss of wetlands at the end of the 5-year monitoring period. Determining the need to further enhance or create additional wetland areas after 3 years of monitoring will provide a 2-year period for Reclamation to take additional pro-active measures towards meeting the goal of no net loss of jurisdictional wetland habitat within the boundaries of the sites.

~~Floodplain values and functions will be enhanced by the project as well as by ROD flows. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to convert to riparian habitats (in some cases, jurisdictional wetlands), both~~

~~seasonal and perennial, within a 3–5 year post-project window. Reclamation will take advantage of opportunities during or after project construction to enhance wetland functions within project boundaries or to create conditions required for functional jurisdictional wetlands (i.e., hydrology, vegetation, and hydric soils) to persist over time. For example, excavation of areas upslope (beyond the 6,000 cfs OHWM line) to a depth coincident with medium or low flow (2000–450 cfs) conditions may provide opportunities to establish the hydrologic conditions necessary for establishing functional jurisdictional wetlands. Reclamation shall initiate a 5-year mitigation monitoring program after the first growing season following project implementation. After a period of 2 years, the need for additional wetland enhancement will be evaluated. At that time, Reclamation, in consultation with the USACE, Regional Water Board, and CDFG, will determine whether there is a need to further enhance or create additional areas of jurisdictional wetlands within the project boundary defined in the EIR so that there will be no net loss of wetlands at the end of the 5-year monitoring period. Determining the need to further enhance or create additional wetland areas after 2 years of monitoring will provide a 3-year period for Reclamation to take additional pro-active measures towards meeting the goal of no net loss of jurisdictional wetland habitat within the boundaries of the sites.~~

~~Reclamation shall conduct a post-project wetland delineation 5 years after project construction for comparison to the pre-construction wetland delineation. In the event that a post-project wetland delineation identifies a net loss of jurisdictional wetlands within the sites, the TRRP, in consultation with the USACE, the Regional Water Board, and CDFG, will implement additional mitigation measures to further enhance or create additional jurisdictional wetlands within the boundaries of the Lewiston–Dark Gulch Rehabilitation Sites. In the event the conditions within the boundary of these sites preclude the ability to adequately mitigate onsite, Reclamation may consider alternate locations for jurisdictional wetland mitigation within the local Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.~~

- 1d** Reclamation shall conduct a post-project wetland delineation 5 years after project construction for comparison to the pre-construction wetland delineation. In the event that the post-project wetland delineation identifies a net loss of jurisdictional wetlands within the sites, the TRRP, in consultation with the USACE, the Regional Water Board, and CDFG, will implement additional mitigation measures to further enhance or create additional jurisdictional wetlands within the boundaries of the Lewiston–Dark Gulch rehabilitation sites. In the event the conditions within the boundary of these sites preclude the ability to adequately mitigate onsite, Reclamation may consider alternate locations for jurisdictional wetland mitigation within the local Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.

*Page 3.7-57 of the EA/Draft EIR has been revised as follows to correct the date referenced in mitigation measure 3.7-4a:*

- 4a** Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for this species in Trinity County extends from June 1 ~~15~~ through July 31. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, mitigation measures 4b and 4c shall be implemented.

*Page 3.7-60 has been revised as follows to clarify the timing in mitigation measure 6b:*

- 6b** Prior to construction in open water ponded habitat (e.g., R1-SO, U-1 DG, and U-2 DG), a qualified biologist will trap and move turtles out of the construction area to nearby suitable habitats. ~~In the event that a pond turtle is observed within the construction limits, the contractor shall temporarily halt construction activities until the turtle has been moved to a safe location within suitable habitat outside of the construction limits.~~

### ***3.3 Changes to the EA/Draft EIR to Correct Minor Errors and Omissions***

In addition to revisions made in response to comments provided on the EA/Draft EIR, the lead agencies have revised certain parts of the document to correct minor errors or omissions. These changes are shown below, organized by chapter/section of the EA/Draft EIR.

#### ***Chapter 1***

No changes have been made to this chapter.

#### ***Chapter 2***

*Page 2-13 of the EA/Draft EIR has been revised as follows to expand the discussion of placement of material at upland activity areas:*

Figures 2-1a, 2-1b, and 2-1c illustrate the upland areas that would be available for placement of excavated materials. Table 2-1 provides additional information on the location and setting of these areas. These areas are associated with alluvial terraces, constructed tailing deposits, or upland landforms that were exposed during historic mining activities. Currently, the lack of soil development in these depositional environments inhibits the recruitment and survival of native vegetation to varying degrees. The placement of excavated material at these areas is expected to result in more favorable vegetation recruitment and survival. The excavated material will include topsoil and alluvial sediments that contain varying degrees of organic material. This material will be used to inoculate appropriate upland activity areas in an effort to enhance the development of riparian vegetation. At the discretion of Reclamation, however, the use of some upland activity areas could change to facilitate the removal and transport of some or all of the excavated alluvial materials to locations authorized for processing with an approved use permit pursuant to Trinity County's Zoning Ordinance (Ordinance No. 315).

*Page 2-17 of the EA/Draft EIR has been revised as follows to expand the discussion of activities H, I and J:*

#### ***Activity H (Grade Control Removal)***

Grade control structures, including a portion of the weir at IC-2 SO, would be removed to increase channel complexity via promotion of channel migration, increased sinuosity, reduced fine sediment storage, increased coarse sediment transport, and restoration of bars. This modification is intended to alter the storage and transport capacity of the alluvial reaches immediately upstream and downstream of the weir.

**Activity I (Coarse Sediment Addition)**

Long-term, large-scale coarse sediment augmentation sites would be created in order to encourage the development of alternate bars and channel migration, provide a coarse sediment supply, and improve access to the sites. Selected vegetation would be removed to facilitate the introduction of this coarse sediment along the channel margin. Coarse sediment would be initially introduced ~~pushed~~ into the main river channel during low flows (July 15-September 15), narrowing the channel and facilitating the river's ability to route the sediment downstream during winter and spring flow events. Oversized material will be incorporated into the project design on the right bank at IC-3 SO to reduce erosion resulting from weir modification. Additional coarse sediment will be introduced using mechanized equipment at select IC locations during spring flow releases. As appropriate, salvaged large woody debris (LWD) would be retained to provide additional habitat complexity.

**Activity J (Placement of Excavated Materials)**

Excavated materials would be moved (often out of the 100-year floodplain) so that there would be no increase in the elevation of the 100-year flood (BFE). Spoiled materials would be carefully spread in uniform layers. Earthen materials would be spread to reasonably even and uniform surfaces that blend with the natural terrain. Depending on landowner requests, replanting may occur. In general, revegetation, beyond the seeding of open spoils areas, would rely on natural recruitment; however, stockpiled topsoil (including organic materials) will be used at site-specific locations to inoculate excavated materials and enhance the colonization of riparian vegetation. Additionally, other ~~However,~~ revegetation measures would be included as mitigation to ~~enhanced at specific locations to~~ minimize impacts described in Chapter 3.

*Table 2-3 on pages 2-25 to 2-28 of the EA/Draft EIR has been revised as follows to reflect changes in area, volume, and activities. These changes are indicated by shading.*

**Revised Table 2-3. Summary of Proposed Action – Activity Areas**

Activity Area (acres)	Treatment Area (acres) <sup>a</sup>	Volume (cubic yards) <sup>b</sup>	Activity
<b>Lewiston Sites</b>			
IC-1 SO (1.51)	1.05	5,100	I
IC-2 SO (0.23)	0.04	50	H
IC-3 SO* (0.48)	0.31	<b>2,100</b>	I
IC-4 DC* (0.21)	0.21	1,000	I
IC-5 DC (0.26)	0.26	1,700	I
IC-6 CW (0.80)	0.80	3,220	H, I

**Revised Table 2-3. Summary of Proposed Action – Activity Areas**

Activity Area (acres)	Treatment Area (acres) <sup>a</sup>	Volume (cubic yards) <sup>b</sup>	Activity
IC-7 CW (0.49)	0.48	1,720	H, I
IC-8 CW* (0.74)	0.74	7,020	H, I
IC-9 CW (0.44)	0.44	3,600	I
IC-10 CW (0.46)	0.46	3,700	I
IC-11 HG (0.37)	0.37	1,220	H, I
IC-12 HG (1.65)	1.05	6,700	I
IC-13 FG* (1.65)	1.05	1,000	I
<i>IC Subtotal (9.29)</i>	7.26	38,130	
R-1 SO (10.20)	8.23	25,200	A, C, D, E
R-2 DC (3.37)	0.48	1,900	A, E
R-3 CW (2.62)	0.77	2,700	E
R-4 CW (2.43)	No treatment		
R-5 HG (1.88)	1.32	8,300	D, E, G
<i>R Subtotal (20.50)</i>	10.80	38,100	
U-1 SO (1.37)	1.37	23,400	A, J
U-2 DC (0.28)	0.28	1,300	A, J
U-3 HG (1.55)	1.55	11,000	A, J
<i>U Subtotal (3.20)</i>	3.20	35,700	

**Revised Table 2-3. Summary of Proposed Action – Activity Areas**

Activity Area (acres)	Treatment Area (acres) <sup>a</sup>	Volume (cubic yards) <sup>b</sup>	Activity
C-1 SO (1.38)	1.38		K
C-2 SO (0.05)	0.05		K
C-3 SO (0.37)	0.37		K
C-4 DC* (0.99)	0.79		K
C-5 DC (0.25)	0.25		K
C-6 CW* (0.89)	0.89		K
C-7 CW (0.89)	0.89		K
C-8 HG (0.39)	0.39		K
C-9 HG (0.65)	0.65		K
C-10 FG* (0.65)	0.50		K
<i>C Subtotal (5.86)</i>	<i>5.86</i>		
<i>Existing Roads (2.21)</i>	<i>2.21</i>		<i>M</i>
<i>New Roads (1.30)</i>	<i>1.30</i>		<i>N</i>
<i>Total (42.36)</i>	<i>30.63</i>		<i>Lewiston</i>
<b>Dark Gulch Site</b>			
IC-1 DG (0.20)	0.20	1,000	I
IC-2 DG (0.18)	0.18	900	I
IC-3 DG (0.16)	0.16	800	I
IC-4 DG (0.44)	0.44	2,100	I

**Revised Table 2-3. Summary of Proposed Action – Activity Areas**

Activity Area (acres)	Treatment Area (acres) <sup>a</sup>	Volume (cubic yards) <sup>b</sup>	Activity
IC-5 DG (0.33)	0.33	1,600	I
IC-6 DG (0.17)	0.17	800	I
IC-7 DG (1.05)	0.83	4,000	H, I
IC-8 DG (0.62)	0.62	3,000	I
IC-9 DG (0.23)	0.23	1,100	I
<i>IC Subtotal (3.38)</i>	<i>3.16</i>	<i>15,300</i>	
R-1 DG (9.18)	7.22	31,600	A, B, D, E
R-2 DG (2.63)	1.95	10,700	B, D, F
R-3 DG (21.22)	2.00	1,300	A, J
R-4 DG (0.59)	0.59	3,800	E
R-5 DG (0.13)	0.13	100	A
R-6 DG (0.43)	0.43	1,400	E
<i>R Subtotal (34.18)</i>	<i>12.32</i>	<i>48,900</i>	
U-1 DG (5.19)	5.19	46,100	A, J
U-2 DG (0.24)	0.24	300	A, J
U-3 DG (1.41)	1.41	1,100	A, J
U-4 DG (0.37)	0.37	1,400	A, J
<i>U Subtotal (7.21)</i>	<i>7.21</i>	<i>48,900</i>	

**Revised Table 2-3. Summary of Proposed Action – Activity Areas**

Activity Area (acres)	Treatment Area (acres) <sup>a</sup>	Volume (cubic yards) <sup>b</sup>	Activity
C-1 DG (0.38)	0.38		K
C-2 DG (0.38)	0.38		K
<i>C Subtotal</i> (.76)	0.76		
X-1 DG (0.02)	0.02	70	N
X-2 DG (0.03)	0.03	100	N
<i>X Subtotal</i> (.05)	0.05	170	
<i>Existing Roads</i> (2.13)	2.13		M
<i>New Roads</i> (4.02)	4.02		N
<i>Total</i> (51.73)	29.65		Dark Gulch
<i>Project Total</i>	60.28		

<sup>a</sup>Area calculated from project GIS<sup>b</sup>Provided by TRRP

\*In-channel activity areas planned for long-term high flow gravel augmentation and their associated staging/gravel storage areas. Future gravel volumes would vary depending on water year. Paired IC and C areas are: (1) IC-3 SO and C-3 SO, (2) IC-4 DC and C-4 DC, (3) IC-8CW and C-6 CW, and (4) IC-13 FG and C-10 FG.

Table 2-5 on Pages 2-36 through 2-38 of the EA/Draft EIR has been revised as follows:

- Activity area IC-13 HG has been revised to read IC-13 FG.
- Activity area R-3 DG has been revised to include activity J, placement of excavated materials.
- Acreage summary for Lewiston Sites has been revised to read 36.23 acres.
- Acreage summary for Dark Gulch total has been revised to read 41.76 acres.
- Acreage summary for project total has been revised to read 77.99 acres.

These revisions do not require that the table be reproduced.

Figure 2.4-j has been added to illustrate the type of equipment that could be used to introduce coarse sediment to specific IC areas during spring high flows. This approach has been successfully incorporated into coarse sediment introduction projects by the USACE on the Yuba River.



## Chapter 3

### Section 3.3

Table 3.3-2 on page 3.3-19 of the EA/Draft EIR has been revised as follows to correct the area and volume of soil disturbance under the action alternatives. Revisions are indicated by shading.

**Revised Table 3.3-2. Area and Volume of Soil Disturbance Under the Proposed Action and Alternative 1**

ACTIVITY TYPE	PROPOSED ACTION	ALTERNATIVE 1
In-channel activities (acres) yards <sup>3</sup>	(9.37) 53,430	(9.78) 53,200
Riverine treatment areas (acres) yards <sup>3</sup>	(25.1) 87,000	(44.95) 190,600
Upland activity areas (acres) yards <sup>3</sup>	(10.41) 84,600	(7.64) 110,600
Staging areas/access roads/river crossings (acres)	(16.33)	(15.62)
(Total acres) Total yards <sup>3</sup>	(60.28) 225,030	(77.99) 354,400

### Section 3.5

Page 3.5-16 of the EA/Draft EIR has been revised as follows to correct typographical errors in mitigation measure 3.5-2b:

- 2b** To ensure that turbidity levels do not exceed the threshold listed above following construction, Reclamation or its contractor shall monitor turbidity and total suspended solids during and after representative rainfall events to determine the effect of the project on Trinity River water quality. At a minimum, field turbidity measurements shall be collected at representative times to accurately gauge the impact of the project on background turbidity levels.
- If increases in turbidity and total suspended solids are observed as a result of erosion from access roads, then field turbidity measurements shall be collected 50 feet upstream of a point adjacent to the end of the access road and 500 feet downstream.
  - If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, the Regional Water Quality ~~Quality~~ Control Board will be notified ~~notified~~. The need to implement erosion control measures for turbidity that is expected to result from overland river flows (versus surface run-off) will be evaluated with Regional Water Quality Control Board staff to determine if remediation ~~remediation~~ measures are needed.

### **Section 3.7**

*Page 3.7-29 of the EA/Draft EIR has been revised as follows to update the discussion of the USACE's verification process for jurisdictional waters, including wetlands, and includes a reference to Appendix 3, USACE verification letter:*

NSR wetland scientists conducted a delineation of jurisdictional waters within the project boundaries. Field observations were conducted between April 11 and 15, 2005, and the resulting wetland delineation is included as Appendix C. The delineation was conducted in accordance with the methodology described in the 1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). A three-parameter approach (i.e., vegetation, soils, and hydrology) was used to identify and delineate the boundaries of jurisdictional wetlands.

The TRRP received the USACE verification letter for the Lewiston–Dark Gulch delineation on January 18, 2008. The verification resulted in minor modifications to figures provided in Section 3.7 of the EA/Draft EIR and Appendix C. The verification letter and related maps are provided as Appendix 3 in this EA/Final EIR.

*Page 3.7-30 of the EA/Draft EIR has been revised as follows to update the discussion of jurisdictional features that occur within the project boundaries based on the verification letter:*

Seven ~~Six~~ types of jurisdictional features were mapped in the project area: riverine (perennial stream), intermittent ~~creek~~ stream, open water, ephemeral drainage, riparian wetland, intermittent pool, and fresh emergent wetland (Figures 3.7-3a-c). These features, which are described below, occupy a total of 120.814 ~~120.26~~ acres of the project area. The total includes 1) an addition of 0.062 acre of fresh emergent wetlands in the Lewiston area, and 2) 0.447 acre of riparian wetland and 0.059 acre of intermittent pool at Dark Gulch.

*Page 3.7-30 of the EA/Draft EIR has been revised as follows to include a discussion of intermittent pools. One intermittent pool was added to the delineation as a result of the verification.*

Intermittent Pool. This feature consists of an intermittent pool that exhibits seasonal inundation. It is likely an artifact of mining activities. Vegetation was limited within the pool's high water mark because of perennial inundation; positive field indicators of wetland hydrology and hydric soils were observed.

*Figures 3.7-3a-c on pages 3.7-31 to 3.7-33 of the EA/Draft EIR have been revised to reflect the wetlands verification provided by the USACE. These revised figures are included at the end of this chapter.*

Table 3.7-5 on page 3.7-43 of the EA/Draft EIR has been revised as follows to clarify impact statement 3.7-1:

**Revised Table 3.7-5. Summary of Vegetation, Wildlife, and Wetland Impacts for the No-Action Alternative, the Proposed Action, and Alternative 1**

NO-ACTION ALTERNATIVE	PROPOSED ACTION	ALTERNATIVE 1	PROPOSED ACTION WITH MITIGATION	ALTERNATIVE 1 WITH MITIGATION
Impact 3.7-1.	Construction activities associated with the project could result in the loss of jurisdictional waters, <u>including wetlands</u> (e.g., <del>wetlands</del> ).			
NI	S	S	LS	LS

Figures 3.7-4c and 3.7-5c on pages 3.7-49 and 3.7-52 of the EA/Draft EIR have been revised to reflect changes in wetland impacts that resulted from the USACE verification. These revised figures are included at the end of this chapter.

Page 3.7-53 of the EA/Draft EIR has been revised as follows to clarify mitigation measure 3.7-3a:

- 3a** A qualified botanist will visit the unsurveyed portion of the Dark Gulch site to determine habitat suitability at those locations for California globe mallow, Dudley's rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica. If suitable habitat is determined to be available, surveys shall be conducted during the blooming periods for these species (i.e., May–July) to determine (1) if the species occur and (2) the quality, location, and extent of any populations. If any ~~either~~ of these species are ~~is~~ found within 250 feet of any proposed disturbance, the following measures shall be implemented.

### Section 3.11

Page 3.11-12 of the EA/Draft EIR has been revised as follows based on Reclamation's determination of eligibility for inclusion on the NRHP subsequent to issuance of the draft document:

#### ***Determinations of Eligibility for Inclusion in the National Register***

Historic resources, sites 07-TRRP-001, 07-TRRP-002, and 07-TRRP-003, constitute the only cultural resources identified during field work. Each of the identified cultural resources within the APE were evaluated to determine their eligibility for listing on the National Register of Historic Places (NRHP). These evaluations are presented in detail in the archaeological specialist's report (Barnes 2007). Reclamation determined that 07-TRRP-001, 07-TRRP-002, and 07-TRRP-003 are not eligible for listing on the NRHP pursuant to 36 CFR Part 60.4 because they lack the historical associations and site attributes that would convey their significance as part of the gold mining industry that helped shape the economic growth of Trinity County and the community of Lewiston.

~~Historic resources, sites 07-TRRP-001, 07-TRRP-002, and 07-TRRP-003, constitute the only cultural resources identified during field work. Determinations of eligibility for listing on the National Register of Historic Places (NRHP) of each of the identified cultural resources within the APE are presented in detail in~~

~~the archaeological specialist's report (U.S. Bureau of Reclamation 2007). Reclamation determined that 07-TRRP-001 and 07-TRRP-002 were not eligible for listing on the NRHP pursuant to 36 CFR Part 60.4 because they lack the historical associations and site attributes that convey their significance as part of the gold mining industry that helped shape the economic growth of Trinity County and the City of Lewiston. Reclamation is still in the process of evaluating site 07-TRRP-003. Final determinations of eligibility will be presented in the EA/Final EIR.~~

*Page 3.11-17 of the EA/Draft EIR has been revised as follows to reflect changes described in the archaeological specialist's report (Barnes, 2007):*

### ***Proposed Action and Alternative 1***

Three cultural resources were identified within the APE. These resources have been determined not to be eligible for listing on the NRHP. Therefore, neither the Proposed Action nor Alternative 1 would affect historic properties pursuant to 36 CFR Part 800.4(d)(1).

~~Implementation of either the Proposed Action or Alternative 1 would not affect known historic properties pursuant to 36 CFR Part 800.4(d)(1). As previously discussed under "Local Setting," the APE was surveyed for the presence of cultural resources. Three cultural resources were identified, and two have been determined not eligible for listing on the NRHP. Therefore, the Proposed Action or Alternative 1 would not affect historic properties pursuant to 36 CFR Part 800.4(d)(1) for 07-TRRP-001 and 07-TRRP-002. The eligibility of 07-TRRP-003 for listing on the NRHP has not yet been determined; however, the activities described in Chapter 2 have been designed to avoid any sites that could be eligible for protection under the NRHP.~~

### ***Section 3.14***

*The second heading under Impact 3.14-1 on page 3.14-21 of the EA/Draft EIR has been revised as follows to include Alternative 1:*

### **Proposed Action/Alternative 1**

## ***Chapter 4***

No changes have been made to this chapter.

## ***Chapter 5***

No changes have been made to this chapter.

## ***Chapter 6***

No changes have been made to this chapter.

## ***Chapter 7***

No changes have been made to this chapter.

## ***Chapter 8***

No changes have been made to this chapter.





*Photos courtesy of Dr. Greg Pasternack, University of California, Davis, 11-29-07. Yuba River downstream of Englebright Dam, USACE—Gravel Injection*



See Figure 3.7-3b



- Site Boundary (131.5 acres)
- River Mile (RM)
- Ordinary High Water Mark (6,000 cfs)

#### Jurisdictional Waters of the U.S. Lewiston

##### *Other Waters*

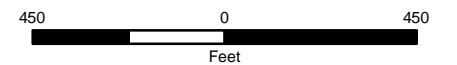
- Ephemeral Drainage (0.004 acre)
- Intermittent Stream (0.012 acre)
- Open Water (0.03 acre)
- Riverine (60.617 acres)

##### *Wetlands*

- Riparian Wetland (1.256 acres)
- Fresh Emergent Wetland (0.062 acre)



1:5,400

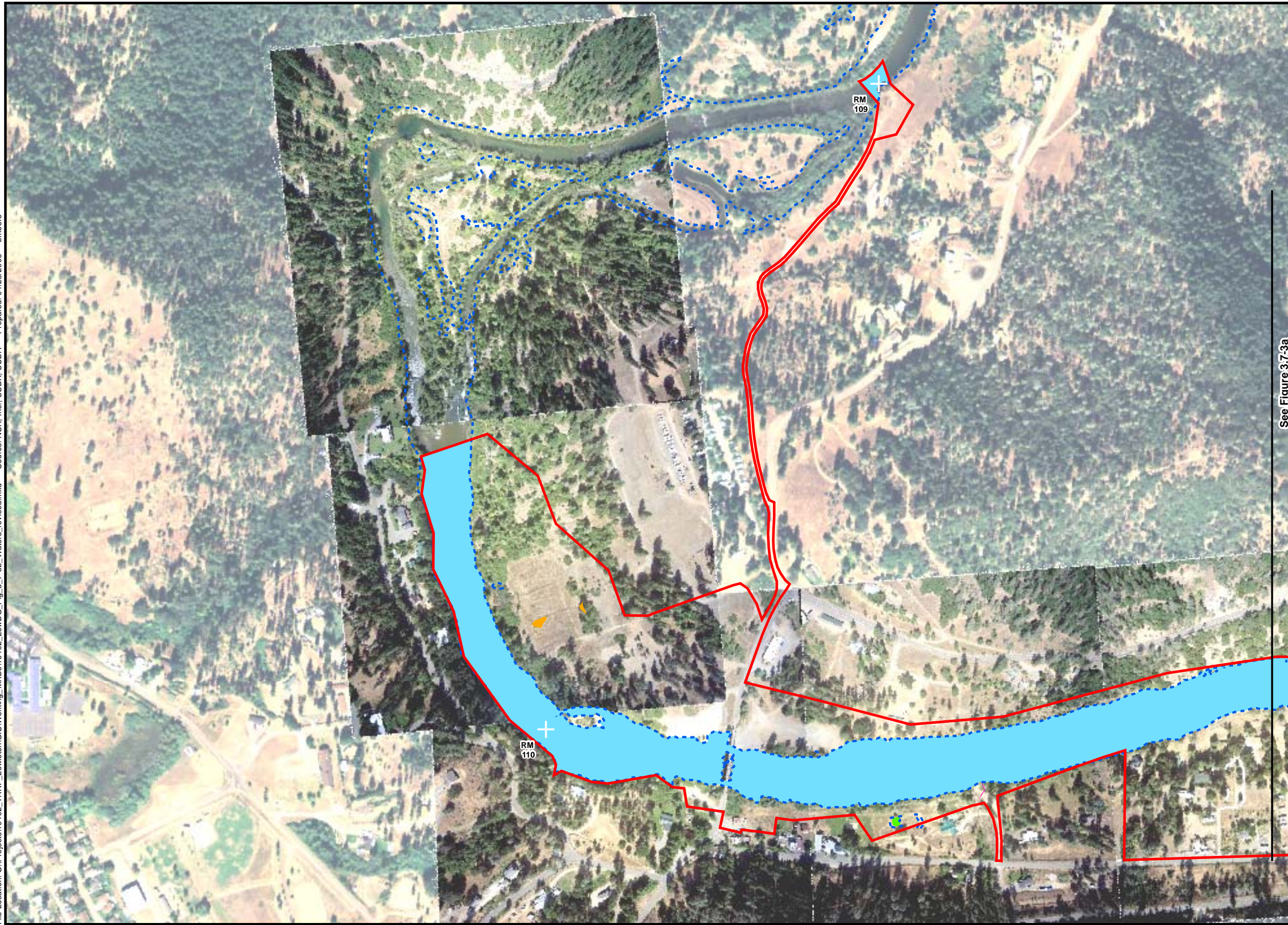





Aerial photography:  
2005-06

**Figure 3.7-3a**  
**Revised - Jurisdictional Waters of the United States**







File Location: G:\Projects\10102\_TRRP\_Lewiston\GIS\Working\_MXD\10102\_LewDG\_Fig. 3.7-3b\_Waters\_revised.mxd Source: NSR, Inc.; USBR, USDA Prepared: 01/28/2008 bmoore





-  Site Boundary (131.5 acres)
-  River Mile (RM)
-  Ordinary High Water Mark (6,000 cfs)

**Jurisdictional Waters of the U.S.**  
**Lewiston**

***Other Waters***

-  Ephemeral Drainage (0.004 acre)
-  Intermittent Stream (0.012 acre)
-  Open Water (0.03 acre)
-  Riverine (60.617 acres)

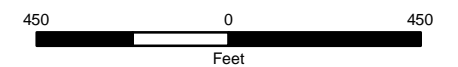
***Wetlands***

-  Riparian Wetland (1.256 acres)
-  Fresh Emergent Wetland (0.062 acre)

See Figure 3.7-3a



1:5,400

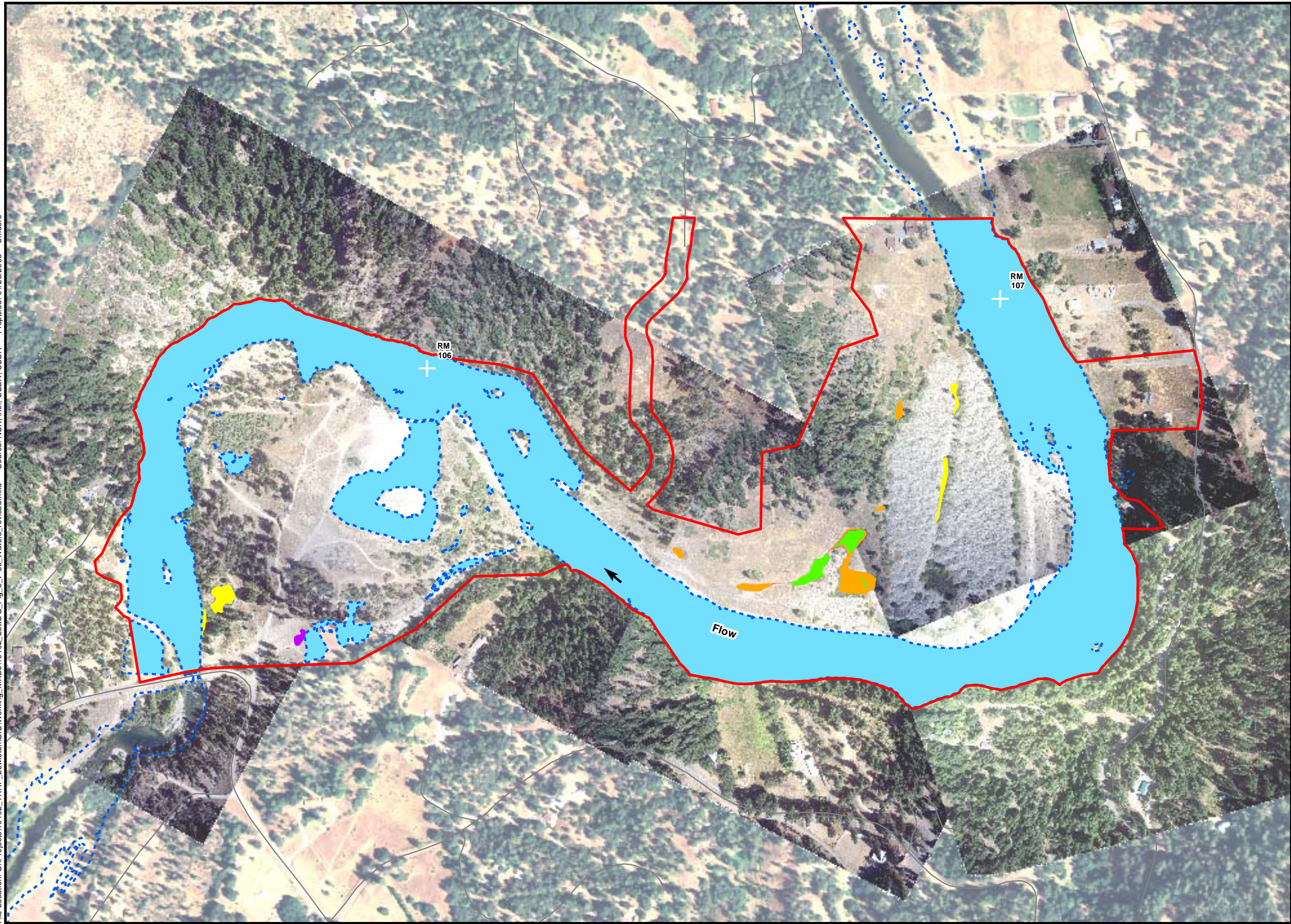


Aerial photography:  
2005  
2006

**Figure 3.7-3b**  
**Revised - Jurisdictional Waters of the United States**



File Location: G:\Projects\10102\_TRRP\_Lewiston\GIS\Working\_MXDs\10102\_LewDG\_Fig. 3.7-3c\_Waters\_revised.mxd Source: NSR, Inc.; USBR; USDA bmoore Prepared: 01/28/2008



- Site Boundary (152 acres)
- River Mile (RM)
- Ordinary High Water Mark (6,000 cfs)

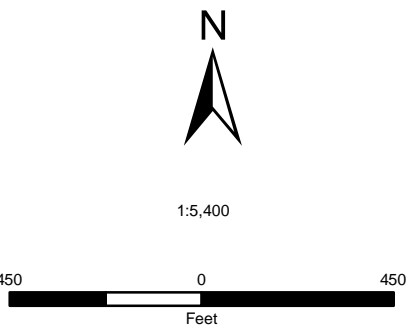
**Jurisdictional Waters of the U.S.  
Dark Gulch**

**Other Waters**

- Ephemeral Drainage (0.003 acre)
- Intermittent Stream (0.006 acre)
- Open Water (0.379 acre)
- Riverine (57.279 acres)

**Wetlands**

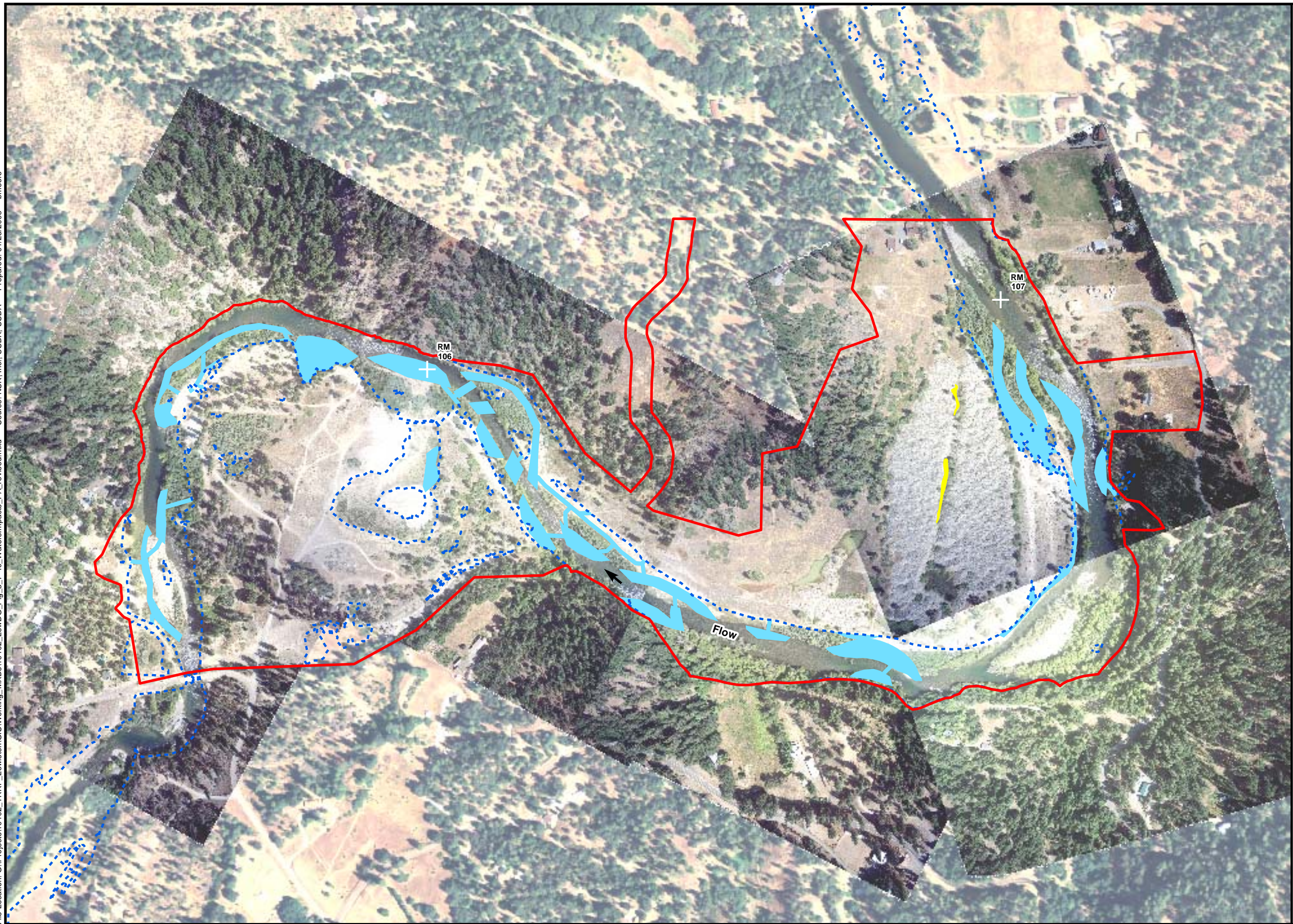
- Intermittent Pool (0.059 acre)
- Riparian Wetland (0.447 acre)
- Fresh Emergent Wetland (0.657 acre)



**Figure 3.7-3c**  
**Revised - Jurisdictional Waters of the United States**



File Location: G:\Projects\10102\_TRRP\_Lewiston\GIS\Working\_MXD\10102\_LewDG\_Fig\_3\_7-4c\_WatersImpacts\_PA\_revised.mxd Source: NSR, Inc.; USBR; USDA Prepared: 01/29/2008 bmoore



- Site Boundary (144.85 acres)
- River Mile (RM)
- Ordinary High Water Mark (6,000 cfs)

**Impacts to Jurisdictional Waters**  
**Dark Gulch**

**Other Waters**

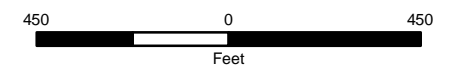
- Riverine (11.25 acres)

**Wetlands**

- Riparian Wetland (0.164 acre)



1:5,400

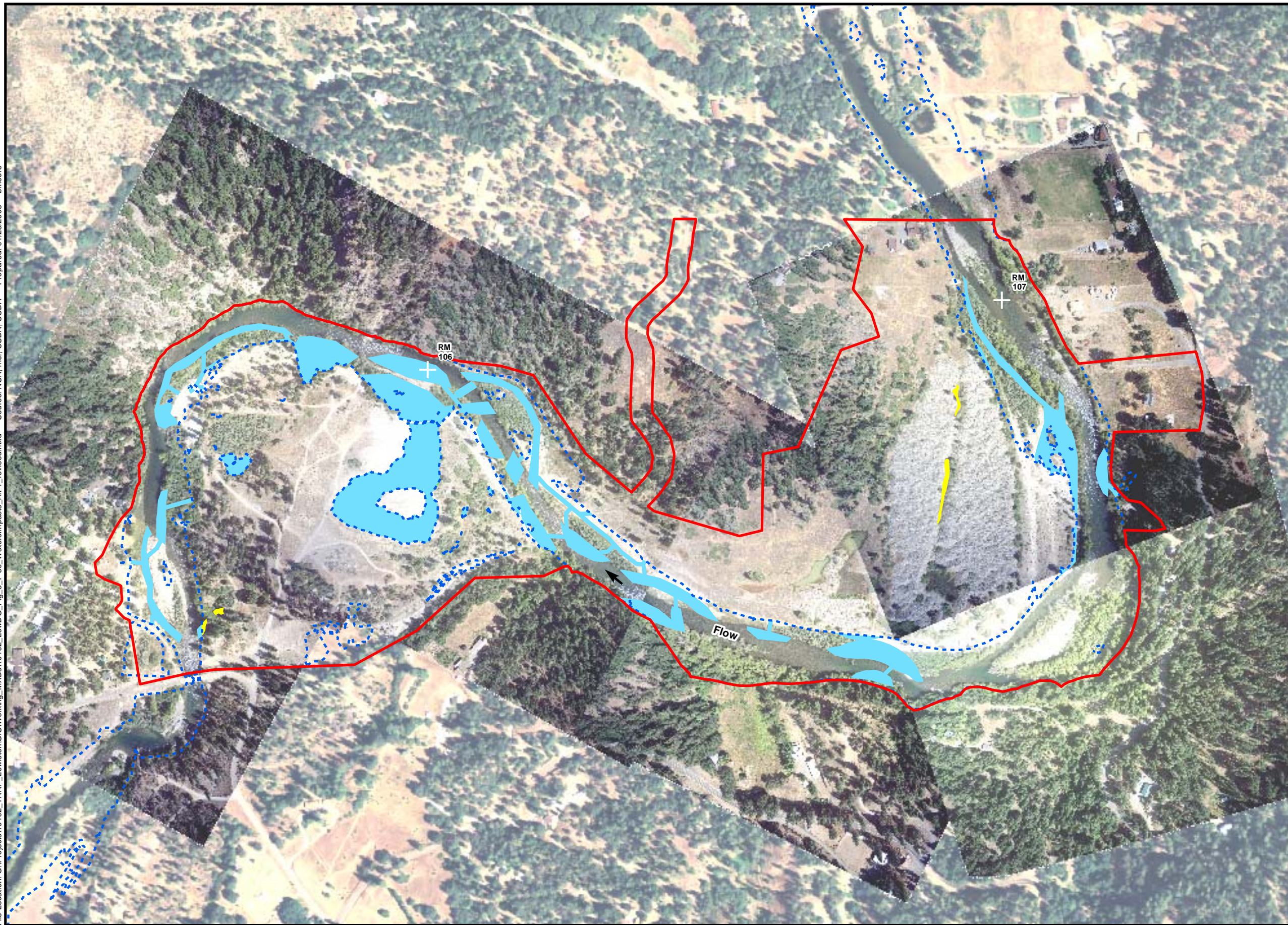


Aerial photography:  
July 2005  
July 2006

**Figure 3.7-4c**  
**Revised - Impacts of Proposed Action to Jurisdictional Waters of the United States**



File Location: G:\Projects\10102\_TRRP\_Lewiston\GIS\Working\_MXD\10102\_LewDG\_Fig. 3. 7-5c\_WatersImpacts\_Alt-1\_revised.mxd Source: NSR, Inc.; USBR; USDA bmoore Prepared: 01/28/2008



- Site Boundary (152 acres)
- + River Mile (RM)
- Ordinary High Water Mark (6,000 cfs)

### Impacts to Jurisdictional Waters Dark Gulch

#### Other Waters

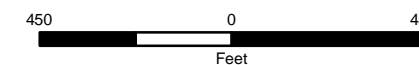
- Riverine (14.626 acres)

#### Wetlands

- Riparian Wetland (0.215 acre)
- Fresh Emergent Wetland (0.001 acre)



1:5,400



Aerial photography:  
July 2005  
July 2006

**Figure 3.7-5c**  
**Revised - Impacts of Alternative 1 to Jurisdictional Waters of the United States**



## **Discussion of Final Mitigation Monitoring and Reporting Program**

## ***Discussion of Final Mitigation Monitoring and Reporting Program***

### ***4.1 Introduction***

Volume 3 of the EA/Draft EIR for the project provided a draft Mitigation Monitoring and Reporting Program (MMRP) as Appendix A. This chapter addresses the elements associated with the Final MMRP and project implementation. Appendix 1 contains a stand-alone version of the Final MMRP that will be included in the various regulatory submittals necessary to implement this project. The purpose of discussing the MMRP in the EA/Final EIR is to reiterate to the reader the mitigation responsibilities of Reclamation and the TCRCD in implementing the Lewiston–Dark Gulch project. The mitigation measures listed in the Final MMRP are required by law or regulation and will be adopted by the TCRCD as part of its overall project approval.

Mitigation is defined by both the California Environmental Quality Act (CEQA), Section 15370, and the National Environmental Policy Act (NEPA) as a measure which:

- a) Avoids the impact altogether by not taking a certain action or parts of an action
- b) Minimizes impacts by limiting the degree or magnitude of the action and its implementation
- c) Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment
- d) Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project
- e) Compensates for the impacts by replacing or providing substitute resources or environments

Mitigation measures provided in the Final MMRP are identified in Chapter 3, the Affected Environment and Environmental Consequences, of the EA/Draft EIR (as amended in the EA/Final EIR) as feasible and effective in mitigating project-related environmental impacts. The draft mitigation measures were also summarized in Volume 1, Executive Summary, of the EA/Draft EIR. Comments received on the EA/Draft EIR resulted in non-substantial revisions to the originally proposed mitigation measures contained in the Draft MMRP.

This section of the EA/Final EIR includes discussions of the following topics related to the MMRP: legal requirements, the intent of the MMRP, the development and approval process for the MMRP, the authorities and responsibilities associated with the implementation of the MMRP, and resolution of noncompliance complaints.

## ***4.2 Legal Requirements***

The legal basis for the development and implementation of the MMRP lies within both CEQA (including the California Public Resources Code) and NEPA. Sections 21002 and 21002.1 of the California Public Resources Code state:

- f) Public agencies are not to approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects; and
- g) Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.

Section 21081.6 of the California Public Resources Code further requires that:

- h) The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.
- i) The monitoring program must be adopted when a public agency makes its findings under CEQA so that the program can be made a condition of project approval in order to mitigate significant effects on the environment. The program must be designed to ensure compliance with mitigation measures during project implementation to mitigate or avoid significant environmental effects.

NEPA 40 CFR Section 1502.14f requires:

- j) Agencies shall include appropriate mitigation measures not already included in the proposed action or alternatives.

## ***4.3 Intent of the Mitigation Monitoring and Reporting Program***

The MMRP is intended to satisfy the requirements of CEQA as they relate to the project. It is anticipated to be used by Reclamation and TCRCD, participating agencies, project contractors, and mitigation monitoring personnel during implementation of the project.

The primary objective of the MMRP is to ensure the effective implementation and enforcement of adopted mitigation measures and permit conditions. The MMRP will provide for monitoring of construction activities as needed, on-site identification and resolution of environmental problems, and proper reporting to lead agency staff.

## ***4.4 Development and Approval Process***

The timing elements for implementing mitigation measures and the definition of the approval process have been provided in detail throughout this MMRP to assist staff from Reclamation and the TCRCD by providing the most usable monitoring document possible.

### ***4.5 Authorities and Responsibilities***

Reclamation, functioning as the TRRP, will have the primary responsibility for the execution and proper implementation of the MMRP. The TCRCD may provide Reclamation with support, as warranted.

Reclamation will be responsible for the following activities:

- a) Coordination of monitoring activities
- b) Management of the preparation and filing of monitoring compliance reports
- c) Maintenance of records concerning the status of all approved mitigation measures

### ***4.6 Summary of Monitoring Requirements***

Appendix A of the EA/Draft EIR summarizes the mitigation measures and associated monitoring requirements proposed for the project. Comments received on the EA/Draft EIR resulted in minor changes in technical requirements associated with certain mitigation measures. These changes are shown in Chapter 3 and have been incorporated into the final MMRP. Overall, mitigation measures are retained in essentially the same form as originally prescribed in the EA/Draft EIR – Chapter 3.0, Affected Environment and Environmental Consequences, and Appendix A – Draft Mitigation Monitoring and Reporting Program. The final MMRP is contained as Appendix 1 of this EA/Final EIR.

### ***4.7 Resolution of Noncompliance Complaints***

Any person or agency may file a complaint that states noncompliance with the mitigation measures that were adopted as part of the approval process for the project. The complaint shall be directed to Reclamation, via the TRRP office (P.O. Box 1300, 1313 South Main Street, Weaverville, CA 96093) and to the Trinity County Resource Conservation District (P.O. Box 1450, 1 Horseshoe Lane, Weaverville CA 96093) in written form, providing detailed information on the purported violation. Reclamation and the TCRCD shall conduct an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, Reclamation shall take the necessary action(s) to remedy the violation. The complainant shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented in response to the specific noncompliance issue.



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## **Mitigation Monitoring and Reporting Program**

# **LEWISTON–DARK GULCH REHABILITATION PROJECT: TRINITY RIVER MILE 105.4 TO 111.7**

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## ***Mitigation Monitoring and Reporting Program***

**February 2008**

**State Clearinghouse  
SCH # 2007042161**

***Project Applicant and Federal Co-Lead Agency for NEPA***

Trinity River Restoration Program  
U. S. Department of the Interior  
Bureau of Reclamation  
P. O. Box 1300  
1313 Main Street  
Weaverville, CA 96093

***Federal Co-Lead Agency for NEPA***

U.S. Department of Agriculture  
Shasta-Trinity National Forest  
3644 Avtech Parkway  
Redding, CA 96002

***Federal Cooperating Agency for NEPA***

U. S. Department of Interior  
Bureau of Land Management – Redding Field Office  
355 Hemsted Drive  
Redding, CA 96002

***California Lead Agency for CEQA***

Trinity County Resource Conservation District  
P. O. Box 1450  
#1 Horseshoe Lane  
Weaverville, CA 96093

***Applicant's Consultant:***

North State Resources, Inc.  
5000 Bechelli Lane, Suite 203  
Redding, CA 96002

# Mitigation Monitoring and Reporting Program

## Introduction

This document comprises the Final Mitigation Monitoring and Reporting Program (MMRP) for the Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7 (project). The purpose of providing the MMRP as a stand-alone document in the EA/Final EIR is to make clear to the reader the mitigation responsibilities of the Bureau of Reclamation (Reclamation), and the Trinity County Planning Department (Trinity County) in implementing the project. The mitigation measures listed herein are required by law or regulation and will be adopted by Trinity County as part of the overall project approval.

Mitigation is defined by both the California Environmental Quality Act (CEQA) – Section 15370 and the National Environmental Policy Act (NEPA) as a measure which:

- Avoids the impact altogether by not taking a certain action or parts of an action
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation
- Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project
- Compensates for the impacts by replacing or providing substitute resources or environments

Mitigation measures provided in this MMRP were identified in Chapter 3, Affected Environment and Environmental Consequences of the EA/Draft EIR, as feasible and effective in mitigating project-related environmental impacts. These measures were also summarized in Volume I, Executive Summary of the EA/Draft EIR.

This MMRP includes a discussion of the following topics related to the MMRP: legal requirements, the intent of the MMRP, the development and approval process for the MMRP, the authorities and responsibilities associated with the

implementation of the MMRP, a description of the mitigation summary table, and resolution of noncompliance complain.

## **Legal Requirements**

The legal basis for the development and implementation of the MMRP lies within both CEQA (including the California Public Resources Code) and NEPA Sections 21002 and 21002.1 of the California Public Resources Code state:

- Public agencies are not to approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects; and
- Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.

Section 21081.6 of the California Public Resources Code further requires that:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.
- The monitoring program must be adopted when a public agency makes its findings under CEQA so that the program can be made a condition of project approval in order to mitigate significant effects on the environment. The program must be designed to ensure compliance with mitigation measures during project implementation to mitigate or avoid significant environmental effects.

NEPA 40 CFR Section 1502.14f requires that:

- Agencies shall include appropriate mitigation measures not already included in the proposed action or alternatives.

## **Intent of the Mitigation Monitoring and Reporting Program**

The MMRP is intended to satisfy the requirements of CEQA as they relate to the project. It is anticipated to be used by Reclamation and Trinity County staff, participating agencies, project contractors, and mitigation monitoring personnel during implementation of the project.

The primary objective of the MMRP is to ensure the effective implementation and enforcement of adopted mitigation measures and permit conditions. The MMRP will provide for monitoring of construction activities as needed, on-site identification and resolution of environmental problems, and proper reporting to lead agency staff.

## Development and Approval Process

The timing elements for implementing mitigation measures and the definition of the approval process have been provided in detail through this MMRP to assist staff from Reclamation and Trinity County by providing the most usable monitoring document possible.

## Authorities and Responsibilities

Reclamation, functioning as the TRRP, will have the primary responsibility for the execution and proper implementation of the MMRP. Trinity County may provide Reclamation with support, as warranted. Reclamation will be responsible for the following activities:

- Coordination of monitoring activities
- Management of the preparation and filing of monitoring compliance reports
- Maintenance of records concerning the status of all approved mitigation measures

## Summary of Monitoring Requirements

Table 1, which follows, summarizes the mitigation measures and associated monitoring requirements proposed for the project. Table 1 consists of the following four columns:

- **Mitigation Measure:** Lists the mitigation measures identified for each significant impact discussed in the EA/Draft EIR for the project. The same mitigation numbering system used in the EA/Draft EIR is carried forward in this MMRP.
- **Timing/Implementation:** Indicates at what point in time or project phase the mitigation measure will need to be implemented.

- **Responsible Parties (tasks):** Documents which agency or entity is responsible for implementing mitigation measures and what, if any, coordination is required (e.g., approval from Caltrans). If more than one party has responsibility under a given mitigation measure, the tasks of each individual party is identified parenthetically (e.g., “implementation” or “monitoring”).
- **Verification:** Provides spaces to be initialed and dated by the individual responsible for verifying compliance with each specific mitigation measure.

## Resolution of Noncompliance Complaints

Any person or agency may file a complaint that states noncompliance with the mitigation measures that were adopted as part of the approval process for the project. The complaint shall be directed to Reclamation, via the TRRP office (P.O. Box 1300, 1313 South Main Street, Weaverville, CA 96093) and Trinity County (P.O. Box 2819, 60 Glen Road, Weaverville, CA 96093) in written form, providing detailed information on the purported violation. Reclamation and Trinity County Planning shall conduct an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, Reclamation shall take the necessary action(s) to remedy the violation. The complainant shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented in response to the specific noncompliance issue.

**TABLE 1 SUMMARY OF MITIGATION MONITORING REQUIREMENTS**

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Chapter 3.3 Geology, Fluvial Geomorphology, and Soils			
<b>Impact 3.3-2 Construction activities associated with the project could potentially result in increased erosion and short-term sedimentation of the Trinity River.</b>			
<p><b>Mitigation Measure 2a</b> Reclamation or its contractors shall implement the following measures during construction activities:</p> <ul style="list-style-type: none"> <li>• Areas where ground disturbance would occur shall be identified in advance of construction and limited to only those areas that have been approved by Reclamation.</li> <li>• All vehicular construction traffic shall be confined to the designated access routes and staging areas.</li> <li>• Disturbance shall be limited to the minimum necessary to complete all rehabilitation activities.</li> <li>• All supervisory construction personnel shall be informed of environmental concerns, permit conditions, and final project specifications.</li> </ul>	Construction	Reclamation	
<p><b>Mitigation Measure 2b</b> Reclamation or its contractors shall prepare an erosion and sedimentation control plan (Storm Water Pollution Prevention Plan [SWPPP]). Measures for erosion control will be prioritized based on proximity to the river. The following measures shall be used as a guide to develop this plan:</p> <ul style="list-style-type: none"> <li>• Restore disturbed areas to pre-construction contours to the fullest extent feasible.</li> <li>• Salvage, store, and use the highest quality soil for revegetation.</li> <li>• Discourage noxious weed competition and control noxious weeds.</li> <li>• Clear or remove roots from steep slopes immediately prior to scheduled construction.</li> <li>• Leave drainage gaps in topsoil and spoil piles to accommodate surface water runoff.</li> <li>• To the fullest extent possible, cease excavation activities during significantly wet or windy weather.</li> <li>• Use bales and/or silt fencing as appropriate.</li> <li>• Before seeding disturbed soils, work the topsoil to reduce compaction caused by</li> </ul>	Pre-Construction Construction Post-Construction	Reclamation	

## Appendix 1

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>construction vehicle traffic.</p> <ul style="list-style-type: none"> <li>Rip feathered edges (and floodplain surfaces where appropriate) to approximately 18 inches depth. The furrowing of the river's edge will remove plant roots to allow mobilization of the bed, but will also intercept sediment before it reaches the waterway.</li> <li>Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.</li> <li>Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated. If work activities take place during the rainy season, erosion control structures must be in place and operational at the end of each construction day.</li> </ul> <p>Reclamation will develop the erosion and sedimentation control plan in conjunction with the STNF, BLM, and the Regional Water Board and in cooperation with NMFS and CDFG. Reclamation's project manager will ensure the preparation and implementation of an erosion and sediment control plan prior to the start of construction.</p>			

## Chapter 3.5 Water Quality

### Impact 3.5-1 Construction of the project could result in short-term, temporary increases in turbidity and total suspended solids levels during construction.

<p><b>Mitigation Measure 1a</b> Turbidity increases associated with project activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> <li>Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.</li> </ul>	Construction	Reclamation	
<p><b>Mitigation Measure 1b</b> To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall</p>	Construction	Reclamation	



Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected on a daily basis during river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours during this period.</p> <ul style="list-style-type: none"> <li>If the grab sample results indicate that turbidity levels exceed the thresholds established in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.</li> </ul>			
<p><b>Mitigation Measure 1c</b> Fill gravels used on the streambeds, stream banks, and river crossing will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.</p>	Pre-Construction Construction	Reclamation	
<p><b>Mitigation Measure 1d</b> Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project, including silt fences, sediment filters, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls shall be adequate to minimize sediment inputs into the Trinity River until vegetation re-growth occurs. All BMPs and sediment and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.</p>	Pre-Construction Construction	Reclamation	
<p><b>Mitigation Measure 1e</b> To minimize the potential for increases in turbidity and suspended sediments entering the Trinity River as a result of the new access roads, Reclamation or its contractor shall implement the following protocols. (To ensure that turbidity levels do not exceed the thresholds listed in 1a, see measure 1b listed above).</p> <ul style="list-style-type: none"> <li>Keep bare soil to the minimum required by designs. Erosion control devices/measures shall be applied to areas where vegetation has been removed to reduce short-term erosion prior to the start of the rainy season.</li> <li>Keep runoff from bare soil areas well dispersed. Dispersing runoff keeps sediment on-</li> </ul>	Pre-Construction Construction	Reclamation	

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Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>site and prevents sediment delivery to streams. Direct any concentrated runoff from bare soil areas into natural buffers of vegetation or to gentler sloping areas where sediment can settle out.</p> <ul style="list-style-type: none"> <li>• Disconnect and disperse flow paths, including roadside ditches, that might otherwise deliver fine sediment to stream channels.</li> <li>• Decompact or rip floodplain areas so that surfaces are permeable and no surface water runoff occurs.</li> </ul>			
<b>Impact 3.5-2 Construction of the project could result in short-term, temporary increases in turbidity and total suspended solids levels following construction.</b>			
<p><b>Mitigation Measure 2a</b> Turbidity increases associated with project activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> <li>• Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.</li> </ul>	Construction	Reclamation	
<p><b>Mitigation Measure 2b</b> To ensure that turbidity levels do not exceed the threshold listed above following construction, Reclamation or its contractor shall monitor turbidity and total suspended solids during and after representative rainfall events to determine the effect of the project on Trinity River water quality. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed.</p> <ul style="list-style-type: none"> <li>• If increases in turbidity and total suspended solids are observed as a result erosion from access roads, then field turbidity measurements shall be collected 50 feet upstream of a point adjacent to the end of the access road and 500 feet downstream.</li> <li>• If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, the Regional Water Quality Control Board will be notified. The need to implement erosion control measures for turbidity that is expected to result from overland river flows (versus surface run-off) will be evaluated with Regional Water Quality Control Board staff to determine if remediation measures are needed.</li> </ul>	Construction	Reclamation	

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Mitigation Measure 2c</b> To reduce the potential for the new access roads to continually contribute soil materials to the Trinity River following project construction, thereby increasing turbidity and total suspended solids in the river, the new access roads shall be stabilized or decommissioned upon completion of work in those areas. Decommissioning is defined as removing those elements of a road that reroute hillslope drainage and present slope stability hazards.			
<b>Impact 3.5-3 Construction of the project could cause contamination of the Trinity River from hazardous materials spills.</b>			
<b>Mitigation Measure 3a</b> Reclamation shall require that the contractor prepare and implement a spill prevention and containment plan in accordance with applicable federal and state requirements.	Pre-Construction	Reclamation	
<b>Mitigation Measure 3b</b> Reclamation shall include in the construction contract documents a requirement that any construction equipment that would come in contact with the Trinity River will need to be inspected daily for leaks prior to entering the flowing channel. External oil, grease, and mud will be removed from equipment using steam cleaning. Untreated wash and rinse water must be adequately treated prior to discharge if that is the desired disposal option.	Pre-Construction	Reclamation	
<b>Mitigation Measure 3c</b> Reclamation shall include in the construction contract documents a requirement that hazardous materials, including fuels, oils, and solvents, not be stored or transferred within 150 feet of the active Trinity River channel. Areas for fuel storage, refueling, and servicing will be located at least 150 feet from the active river channel. In addition, the construction contractor shall be responsible for maintaining spill containment booms onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.	Pre-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Impact 3.5-5 Construction and maintenance of the project could result in the degradation of Trinity River beneficial uses identified in the Basin Plan.</b>			
The significance of impacts related to sediment, settleable materials, suspended materials, turbidity, and increased stormwater runoff and subsequent potential for erosion, as well as mitigation measures that would reduce the significance of these impacts are addressed under Impacts 3.5.1, 3.5.2, and 3.5.4. The significance of and mitigation for chemical constituents and toxicity impacts are addressed under Impact 3.5.3.	Pre-Construction Construction	Reclamation	

## Chapter 3.6 Fishery Resources

**Impact 3.6-1 Implementation of the project could result in effects on potential spawning and rearing habitat for anadromous fishes, including the federally and state-listed coho salmon.**

<b>Mitigation Measure 1a</b> The proposed construction schedule includes in-river work that could affect spawning spring- and fall-run Chinook salmon, coho salmon, and steelhead or their eggs once in the gravel. To the maximum extent possible, Reclamation will ensure that all in-river construction activities are conducted during late-summer, low-flow conditions (e.g., July 15–September 15). If in-river work activities will be conducted after September 15 (during spawning), work will be coordinated with biologists from NMFS and CDFG to ensure that impacts are minimized.	Pre-Construction Construction	Reclamation	
<b>Mitigation Measure 1b</b> Alluvial material used for coarse sediment additions will be composed of washed, spawning-sized gravels (3/8 to 5 inches diameter) from a local Trinity River basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.	Construction	Reclamation	

**Impact 3.6-2 Implementation of the project could result in increased erosion and sedimentation levels that could adversely affect fishes, including the federally and state-listed coho salmon.**

<b>Mitigation Measure 2a</b> Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast	Construction	Reclamation	
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Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>Region (2001), is summarized below.</p> <ul style="list-style-type: none"> <li>Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits.</li> </ul>			
<p><b>Mitigation Measure 2b</b> To ensure that turbidity levels do not exceed the threshold listed above during project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of construction activities. At a minimum, field turbidity measurements shall be collected on a daily basis during in-water and river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be at a minimum of every 2 hours.</p> <ul style="list-style-type: none"> <li>If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting in-channel construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.</li> </ul>	Construction	Reclamation	
<p><b>Mitigation Measure 2c</b> Proper implementation of erosion and sediment containment devices during and after construction shall be adequate to minimize sediment inputs into the Trinity River. Decompaction and ripping of floodplain areas are expected to eliminate surface runoff during the first year post-construction.</p> <p>Because shoreline construction activities must be able to take place during the fall and potentially during the winter period (after October 15 and before April 15), temporary erosion and sediment control structures must be in place and operational at the end of each construction day. Measures for erosion control will be prioritized based on proximity to the river.</p> <p>Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.</p>	Pre-Construction Construction	Reclamation	
<p><b>Mitigation Measure 2d</b> Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes Best Management Practices (BMPs) for the project. Ripping of all riparian areas to create furrows parallel to the river is</p>	Pre-Construction Construction	Reclamation	

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Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until construction ends. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly.</p> <p>Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if a greater than 50 percent possibility of rain has been forecast within the following 24 hours by the National Weather Service. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.</p>			
<b>Impact 3.6-3 Construction activities associated with the project could potentially result in the accidental spill of hazardous materials that could adversely affect fishes, including the federally and state-listed coho salmon.</b>			
<p>Construction specifications shall include the following measures to reduce potential impacts associated with accidental spills of pollutants (fuel, oil, grease, etc.) to vegetation and aquatic habitat resources within the project boundary:</p> <p><b>Mitigation Measure 3a</b> Equipment and materials shall be stored away from wetland and surface water features.</p>	Pre-Construction	Reclamation	
<p><b>Mitigation Measure 3b</b> Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 150 feet away from waters of the Trinity River or within an adequate fueling containment area.</p>	Construction	Reclamation	
<p><b>Mitigation Measure 3c</b> The contractor will develop and implement site-specific Best Management Practices (BMPs), a water pollution control plan, and emergency spill control plan. The contractor will be responsible for immediate containment and removal of any toxins released.</p>	Construction	Reclamation	



Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<i>Section 3.5, Water Quality, and Section 3.15, Hazards and Hazardous Materials, provide additional details on mitigation measures developed for water quality standards, hazards, and hazardous materials.</i>			
<b>Impact 3.6-4 Construction activities associated with the project could result in the mortality of rearing fishes, including the federally and state-listed coho salmon.</b>			
<b>Mitigation Measure 4a</b> To avoid or minimize potential injury and mortality of fish during riverine activities (removal of grade control structures, channel crossings, addition and grading of coarse sediment), equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.	Construction	Reclamation	
<b>Mitigation Measure 4b</b> Reclamation or its contractor shall minimize potential injury and mortality of fish during the use of low-flow channel crossings. This will be accomplished by minimizing vehicle traffic and by operating equipment and vehicles slowly and deliberately to alert and scare adult and juvenile salmonids away from the crossing area, or by having a person wade ahead of equipment to scare fish away from the crossing area.	Construction	Reclamation	
<b>Mitigation Measure 4c</b> To avoid or minimize potential injury and mortality of fish during excavation and placement of fill materials within the active low-flow channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area. The contractor shall be instructed that before submerging an excavator bucket or laying gravel below the water surface, the excavator bucket will be operated to "tap" the surface of the water, or a person will wade ahead of fill placement equipment to scare fish away from the work area. To avoid impacts to mobile life stages of salmonids that may be present in the water column, the first layers of clean gravel that are being placed into the wetted channel shall be added slowly and deliberately to allow fish to move from the work area.	Construction	Reclamation	
<b>Mitigation Measure 4d</b> Monitoring of the rehabilitated floodplain sites for salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of flood flow events designated as a 1.5- year or less frequent event (i.e., $Q > 6,000$ cfs) for a period of 3 years following construction. These flows, and associated fry stranding surveys, will occur most frequently between January and May. If substantial stranding is observed, Reclamation will take appropriate measures to return stranded fishes to river habitats and to modify floodplain topography to reduce the likelihood of future occurrences of fry stranding.	Post-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Impact 3.6-5 Implementation of the project would result in the permanent or temporary loss of shaded riverine aquatic habitat for anadromous salmonids.</b>			
<p>To maintain overall SRA habitat values within the project reach, the Proposed Action would be designed to minimize losses of riparian vegetation adjacent to the Trinity River channel, except where necessary to re-activate river access to the floodplain. Boundary markers shall be installed along all riparian areas outside of delineated rehabilitation areas. These markers will prevent construction access so that impacts to riparian vegetation are minimized. To compensate for the loss of riparian vegetation within the project boundaries, Reclamation shall implement the following measures:</p> <p><b>Mitigation Measure 5a</b> To mitigate for the loss of riparian habitat, the Project will be designed to preserve riparian vegetation within the site boundaries (1) to increase the diversity of native vegetation types and age classes available post-project and (2) to facilitate natural recolonization of constructed surfaces by native vegetation. Prior to the start of construction activities, Reclamation shall identify potential construction access routes that avoid and/or minimize, to the fullest extent, impacts to riparian habitat. In addition, Reclamation shall clearly identify and flag biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected during construction activities. Each biologically sensitive area to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Reclamation shall inspect and maintain marked areas regularly throughout the construction phase.</p>	Pre-Construction Construction	Reclamation	
<p><b>Mitigation Measure 5b</b> Reclamation shall develop a Riparian Revegetation and Monitoring Plan (Plan), subject to approval by USACE, the Regional Water Board, and CDFG, prior to implementing the proposed project. The Plan shall include measures that ensure that all riparian vegetation removed by the TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam will be replaced by natural recruitment, replanting, or any combination thereof, at an areal ratio of 1:1, within a 5- year time-frame. These measures shall support the TRRP objective to restore the existing homogeneous vegetation pattern with a more diverse assemblage of riparian vegetation, including provisions for incorporation of native species that can resist invasion by noxious plant species. Because the existing Trinity River channel is encroached upon (up to 300 percent) by a homogeneous riparian vegetation community thought to be less suitable for fish and wildlife habitat, the Plan need not require strict replacement based on original stem counts and species.</p>	Pre-Construction Post-Construction	Reclamation	

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Mitigation Measure 5c</b> Reclamation shall initiate a 5-year mitigation monitoring program following the first growing season after project implementation. After a period of 3 years, Reclamation, in consultation with USACE, the Regional Water Board and CDFG, will determine the need, if any, for additional plantings and will assess and/or remedy any loss of riparian habitat, including jurisdictional wetlands within the site boundaries, defined in the EA/EIR, to ensure that no net loss of wetlands and riparian habitat occurs within the 5-year monitoring period. Monitoring the response of riparian habitat to the channel rehabilitation project after 3 years into the 5-year vegetation recovery period will allow Reclamation to take any additional necessary actions to meet the goal of no net loss of riparian habitat within the boundaries of the Lewiston–Dark Gulch sites.	Post-Construction	Reclamation	
<b>Mitigation Measure 5d</b> Reclamation shall complete a post-project wetland delineation and vegetation habitat evaluation as a basis for comparing pre- and post-project conditions and submit the results to USACE, the Regional Water Board, and CDFG. This post-project vegetation survey will occur approximately 5 years after revegetation is completed. In the event that this delineation identifies a net loss in riparian habitat, Reclamation shall enhance or reestablish riparian vegetation that will function as SRA habitat within the boundaries of the rehabilitation sites. Potential options to accomplish this objective include increasing the density and diversity of riparian vegetation to supplement natural recruitment, and introducing riparian plants in locations to expand riparian habitat. In the event that conditions within the boundaries of the Lewiston–Dark Gulch sites preclude adequate onsite mitigation, Reclamation may consider alternate locations for riparian vegetation mitigation within the Trinity River corridor, subject to approval by USACE, the Regional Water Board, and CDFG.	Post-Construction	Reclamation	
<b>Impact 3.6-6 Implementation of the project would result in fish passage being temporarily impaired during the in-stream construction phase.</b>			
<b>Mitigation Measure 6a</b> Fill gravels used on the low water crossings, streambeds and stream banks will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass the Caltrans cleanliness test #227 with a value of 85 or greater.	Construction	Reclamation	
<b>Mitigation Measure 6b</b> Reclamation or its contractor shall construct the low-flow channel crossings to allow adequate depth and velocity for adult and juvenile salmonids to safely pass. Flows associated with storm events are not considered critical as the width and	Construction	Reclamation	

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Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
hydrologic conditions associated with low-flow channel crossings in the Trinity River are not considered to limit fish passage at elevated flows and would be comparable to hydrologic conditions in local riffle and run features. For low-flow channel crossings at base flows, velocities shall not exceed 2 fps to allow for juvenile fish passage. Minimum water depth at low flow shall not be less than 12 inches in two-thirds of the river channel to provide adequate depth for adult salmon and steelhead passage.			
<b>Mitigation Measure 6c</b> The number of vehicle and equipment crossings of the Trinity River will be minimized.			

Chapter 3.7 Vegetation, Wildlife, and Wetlands

**Impact 3.7-1 Construction activities associated with the project could result in the loss of jurisdictional waters, including wetlands.**

<b>Mitigation Measure 1a</b> Prior to the start of construction activities, Reclamation shall retain a qualified biologist to identify potential construction access routes necessary for the project to ensure that these features avoid and/or minimize to the fullest extent impacts to jurisdictional waters. In addition, Reclamation shall clearly identify, and flag in the field, biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected, and will provide the contractor specific instructions to avoid any construction activity within these features. Reclamation shall inspect and maintain marked areas on a regular basis throughout the construction phase.	Pre-Construction	Reclamation	
<b>Mitigation Measure 1b</b> Reclamation shall revise the Draft Riparian Revegetation and Monitoring Plan, based on input from the USACE, Regional Water Board, and CDFG, prior to implementing the proposed project. Though implementation of the draft plan has begun (e.g., revegetation of 50 percent of the impacted areas has occurred), full plan adoption is required as a mitigation measure for previously constructed Reclamation channel rehabilitation projects. The revisions to this plan and subsequent implementation will take place as soon as possible and independent of the implementation of the Proposed Action. The plan shall include measures that ensure that all riparian vegetation (a key parameter of jurisdictional wetlands) removed by TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam is replaced by natural recruitment, replanting, regrowth, or any combination thereof at an areal ratio of 1:1 within a 5-year time frame. Because the present Trinity River channel is encroached (up to 300 percent) with riparian vegetation that is homogenous in nature, this plan need not require strict replacement based on original stem	Pre-Construction Construction	Reclamation	

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
counts and species. The plan shall acknowledge that the ultimate goals of the TRRP include enhancement and maintenance of functional riparian habitat and no net-loss of jurisdictional wetlands throughout the 40-mile reach of the Trinity River below the TRD. Because riparian habitat and jurisdictional wetlands will respond to river restoration with some degree of spatial and temporal variability, areal habitat coverage within the 40-mile reach will remain relatively consistent while habitat changes at specific locations may be measurable.			
<b>Mitigation Measure 1c</b> Reclamation shall initiate a 5-year mitigation monitoring program after the first growing season following project implementation. After a period of 3 years, the need for additional riparian habitat and wetland enhancement will be evaluated. At that time, Reclamation, in consultation with the USACE, Regional Water Board, and CDFG, will determine whether there is a need to further enhance or create additional areas of riparian habitat or jurisdictional wetlands within the project boundary so that there will be no net loss of wetlands at the end of the 5-year monitoring period. Determining the need to further enhance or create additional wetland areas after 3 years of monitoring will provide a 2-year period for Reclamation to take additional pro-active measures towards meeting the goal of no net loss of jurisdictional wetland habitat within the boundaries of the sites.	Pre-Construction Post-Construction	Reclamation	
<b>Mitigation Measure 1d</b> Reclamation shall conduct a post-project wetland delineation 5 years after project construction for comparison to the pre-construction wetland delineation. In the event that the post-project wetland delineation identifies a net loss of jurisdictional wetlands within the sites, the TRRP, in consultation with the USACE, the Regional Water Board, and CDFG, will implement additional mitigation measures to further enhance or create additional jurisdictional wetlands within the boundaries of the Lewiston–Dark Gulch rehabilitation sites. In the event the conditions within the boundary of these sites preclude the ability to adequately mitigate onsite, Reclamation may consider alternate locations for jurisdictional wetland mitigation within the local Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.			
<b>Impact 3.7-3 Construction of the project could result in the loss of individuals of a special-status plant species.</b>			
The following measures shall be implemented at the Dark Gulch site to avoid or minimize project-related impacts to California globe mallow, Dudley's rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica:  <b>Mitigation Measure 3a</b> A qualified botanist will visit the unsurveyed portion of the Dark Gulch site to determine habitat suitability at those locations for California globe mallow,	Pre-Construction	Reclamation	

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Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Dudley's rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica. If suitable habitat is determined to be available, surveys shall be conducted during the blooming periods for these species (i.e., May–July) to determine (1) if the species occur and (2) the quality, location, and extent of any populations. If any of these species are found within 250 feet of any proposed disturbance, the following measures shall be implemented.			
<b>Mitigation Measure 3b</b> Prior to the start of disturbance, exclusionary fencing shall be erected around the known occurrences. If necessary, a qualified botanist should be present to assist with locating these special-status plant populations. The exclusionary fencing shall be periodically inspected throughout each period of construction and be repaired as necessary.	Pre-Construction Construction	Reclamation	
<b>Mitigation Measure 3c</b> If a population cannot be fully avoided, the applicant shall retain a qualified botanist to contact CDFG to determine the appropriate salvage and relocation measures.	Pre-Construction Construction	Reclamation	

**Impact 3.7-4 Construction activities associated with the project could result in impacts to the state-listed little willow flycatcher.**

<b>Mitigation Measure 4a</b> Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for this species in Trinity County extends from June 1 through July 31. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, mitigation measures 4b and 4c shall be implemented.	Pre-Construction Construction	Reclamation	
<b>Mitigation Measure 4b</b> A qualified biologist shall conduct a minimum of one pre-construction survey for the little willow flycatcher within the project sites and a 250-foot buffer around the sites. The survey shall be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey shall be used to ensure that no nests of this species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, CDFG shall be contacted prior to the start of construction to determine the appropriate mitigation measures.	Pre-Construction	Reclamation	
<b>Mitigation Measure 4c</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	Pre-Construction	Reclamation	



Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Impact 3.7-5 Construction activities associated with the project could result in impacts to the foothill yellow-legged frog.</b>			
<b>Mitigation Measure 5a</b> If any construction in the Trinity River channel will occur prior to August 1 of any construction season, a pre-construction survey for yellow-legged frog larvae and/or eggs shall be conducted by a qualified biologist. This survey would need to be conducted within the construction boundary no more than 2 weeks prior to the start of in-stream construction activities. If larvae or eggs are detected, the biologist shall relocate them to a suitable location outside of the construction boundary.	Pre-Construction	Reclamation	
<b>Mitigation Measure 5b</b> In the event that a yellow-legged frog is observed within the construction boundary, the contractor shall temporarily halt in-stream construction activities until the frog has been moved to a safe location with suitable habitat outside of the construction limits.	Construction	Reclamation	
<b>Mitigation Measure 5c</b> Mitigation measures presented in Section 3.5 (Water Quality) for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for potential indirect impacts to dispersal habitat for the yellow-legged frog due to sedimentation and accidental spills.	Construction	Reclamation	
<b>Mitigation Measure 5d</b> The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) will be fully implemented.	Pre-Construction Construction	Reclamation	
<b>Impact 3.7-6 Construction activities associated with the project could result in impacts to the northwestern pond turtle.</b>			
<b>Mitigation Measure 6a</b> A minimum of one survey for pond turtle nests shall be conducted during the nesting season (generally late June-July) prior to construction. A qualified biologist shall be retained by Reclamation to conduct the survey. If a pond turtle nest is found, the biologist shall flag the site and determine whether construction activities can avoid affecting the nest. If the nest cannot be avoided, the nest shall be excavated by the biologist and reburied at a suitable location outside of the construction limits.	Pre-Construction	Reclamation	
<b>Mitigation Measure 6b</b> Prior to construction in open water ponded habitat (e.g., R1-SO,U-1 DG, and U-2 DG), a qualified biologist will trap and move turtles out of the construction area to nearby suitable habitats.	Construction	Reclamation	

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Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Mitigation Measure 6c</b> Mitigation measures presented in Section 3.5 (Water Quality) for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for the potential indirect impacts to potential dispersal habitat due to sedimentation and accidental spills.	Construction	Reclamation	
<b>Mitigation Measure 6d</b> The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) shall be fully implemented.	Pre-Construction Construction	Reclamation	
<b>Impact 3.7-7 Construction activities associated with the project could result in impacts to yellow warblers, yellow-breasted chats, nesting Vaux's swifts, and ruffed grouse.</b>			
<b>Mitigation Measure 7a</b> Grading and other construction activities shall be scheduled to avoid the nesting season for these species to the extent possible. The nesting season for these species in Trinity County extends from March 15 through August. If construction occurs outside the breeding season, no further mitigation is necessary. If construction during the breeding season cannot be completely avoided, measures 7b and 7c shall be implemented.	Construction	Reclamation	
<b>Mitigation Measure 7b</b> A qualified biologist shall conduct a minimum of one preconstruction survey for these species within the project site and a 250-foot buffer around the site. The survey shall be conducted no more than 15 days prior to the initiation of construction in any given area. The preconstruction survey shall be used to ensure that no nests of these species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, a qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest.	Pre-Construction	Reclamation	
<b>Mitigation Measure 7c</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting habitat (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	Construction	Reclamation	
<b>Impact 3.7-8 Construction activities associated with the project could disrupt nesting by special-status raptors.</b>			
<b>Mitigation Measure 8a</b> Construction shall be scheduled to avoid the nesting season for raptors to the extent feasible. The nesting season for most raptors in Trinity County extends from February 15 through July 31. Thus, if construction can be scheduled to occur between	Construction	Reclamation	

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
August 1 and February 14, the nesting season will be avoided and no impacts to nesting raptors would be expected. If it is not possible to schedule construction during this time, the following mitigation measures shall be implemented.			
<b>Mitigation Measure 8b</b> Pre-construction surveys for nesting raptors shall be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the biologist shall inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 500 feet) to the construction area to be disturbed by these activities, the biologist, in consultation with the CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest.	Pre-Construction	Reclamation	
<b>Mitigation Measure 8c</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting habitat (i.e., trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	Pre-Construction	Reclamation	
<b>Impact 3.7-9 Construction activities associated with the project could result in impacts to special-status bats and the ring-tailed cat.</b>			
<b>Mitigation Measure 9a</b> A pre-construction survey for roosting bats and ring-tailed cats shall be conducted prior to any removal of trees $\geq 12$ inches in diameter at 4.5 feet above grade. The survey shall be conducted by a qualified biologist. No activities that would result in disturbance to active roosts of special-status bats or dens of ring-tailed cats shall proceed prior to completion of the surveys. If no active roosts or dens are found, no further action is needed. Because bats are known to abandon young when disturbed, if a maternity roost is located, a qualified bat biologist shall determine the extent of a construction-free zone to be implemented around the roost. If a bat maternity roost or hibernaculum or a ring-tailed cat den is present, Measures 9b and/or 9c shall be implemented. CDFG shall also be notified of any active bat nurseries within the disturbance zones.	Pre-Construction Construction	Reclamation	
<b>Mitigation Measure 9b</b> If an active maternity roost or hibernaculum is found, the project shall be redesigned to avoid the loss of the tree occupied by the roost, if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree shall commence before bat maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). The disturbance-free buffer zones described above shall be	Construction	Reclamation	

Appendix 1

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>observed during the bat maternity roost season (March 1–July 31). If a non-breeding bat hibernaculum is found in a tree scheduled to be razed, the individuals shall be safely evicted, under the direction of a qualified bat biologist (as determined by a Memorandum of Understanding with CDFG), by opening the roosting area to allow air to flow through the cavity. Demolition shall then follow no sooner than the following day (i.e., there will be no less than one night between initial disturbance for air flow and the demolition). This action will allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.</p>			
<p><b>Mitigation Measure 9c</b> If an active ring-tailed cat nest is found, the project will be redesigned to avoid the loss of the tree occupied by the nest if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree shall commence outside of the breeding season (February 1 to August 30). If a non-breeding den is found in a tree scheduled to be razed, the individuals shall be safely evicted under the direction of a qualified biologist. Trees with dens that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow ring-tailed cats to escape during the darker hours.</p>	Construction	Reclamation	
<p><b>Impact 3.7-11 Construction activities associated with the project could result in impacts to BLM and USFS sensitive species.</b></p>			
<p>Since no significant impacts for the Pacific fisher were identified, no mitigation is required. Mitigation measures 4a-c will reduce impacts to the little willow flycatcher to a less-than-significant level. Mitigation measures 5a-d will reduce the impacts to the foothill yellow-legged frog to a less-than-significant level. Mitigation measures 6a-d will reduce the impacts to the northwestern pond turtle to a less-than-significant level. Mitigation measures 8a-c will reduce the impacts to the northern goshawk to a less-than-significant level, and mitigation measures 9a-b will reduce the impacts to special-status bat species to a less-than-significant level.</p>	Pre-Construction Construction	Reclamation	
<p><b>Impact 3.7-13 Implementation of the project could result in the spread of non-native and invasive plant species.</b></p>			
<p><b>Mitigation Measure 13a</b> When using imported erosion control materials (as opposed to rock and dirt berms), use only certified weed-free materials, mulch, and seed.</p>	Construction	Reclamation	

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Mitigation Measure 13b</b> Preclude the use of rice straw in riparian areas.	Construction	Reclamation	
<b>Mitigation Measure 13c</b> Limit any import or export of fill to material known to be weed free.	Construction	Reclamation	
<b>Mitigation Measure 13d</b> Require the construction contractor to thoroughly wash all equipment prior to entering the worksite. Equipment shall be inspected to ensure that it is free of plant parts as well as soils, mud, or other debris that may carry weed seeds.	Construction	Reclamation	
<b>Mitigation Measure 13e</b> Use a mix of native grasses, forbs, and non-persistent non-native species for seeding disturbed areas that are subject to infestation by non-native and invasive plant species. Where appropriate, a heavy application of mulch will be used to discourage introduction of these species. Use of planting plugs of native grass species may be considered to accelerate occupation of disturbed sites and increase the likelihood of reestablishing a self-sustaining population of native plant species.	Post-Construction	Reclamation	
<b>Mitigation Measure 13f</b> Within the first 3 to 5 years post-project, if it is determined that the project has caused non-native invasive vegetation to out-compete desired planted or native colonizing riparian vegetation, opportunities to control these non-native species shall be considered. When implementing weed control techniques, the approach will consider using all available control methods known for a weed species. Control methods will be consistent with those adopted by the TCWMC and the Trinity County Board of Supervisors.	Post-Construction	Reclamation	

Chapter 3.8 Recreation

**Impact 3.8-1 Construction associated with the project could disrupt recreation activities such as boating, fishing, and swimming in the Trinity River.**

<b>Mitigation Measure 1a</b> Reclamation or its contractor shall provide precautionary signage to warn recreational users of the potential safety hazards associated with project construction activities. Signs and/or buoys shall be placed within and directly adjacent to the project boundaries along the Trinity River in accordance with the requirements specified in Title 14, Article 6 of the California Code of Regulations. Notification signs shall be posted at the Bucktail Hole River Access and at the privately owned River Oaks Resort, Trinity River Resort and RV Park, and the Old Lewiston Bridge RV Resort. Additionally, public notification of proposed project construction activities and associated safety hazards shall be circulated	Construction	Reclamation	
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Appendix 1

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
in the local <i>Trinity Journal</i> newspaper.			
<b>Mitigation Measure 1b</b> Reclamation will repair and/or replace any facilities that may be inadvertently affected by project activities at the Sven-Olbertson Watchable Wildlife Area or the Bucktail Hole River Access. This measure would include installation of interpretive signage consistent with the requirements of the STNF and BLM. A pre-construction meeting with STNF and BLM will be used to identify the level of vegetative screening that will be retained at these recreation sites.	Post-Construction	Reclamation	
<b>Impact 3.8-2 Construction of the project could result in an increased safety risk to recreational users or resource damage to lands within the project boundaries.</b>			
<b>Mitigation Measure 2a</b> Please see mitigation measure 1a above.	Construction	Reclamation	
<b>Impact 3.8-3 Construction associated with the project could lower the Trinity River's aesthetic values for recreationists by increasing turbidity levels in the Trinity River.</b>			
<p><b>Mitigation Measure 3a</b> Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River listed in the Basin Plan for the North Coast Region (2001) is summarized below.</p> <ul style="list-style-type: none"> <li>▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.</li> </ul>	Construction	Reclamation	
<b>Mitigation Measure 3b</b> To ensure that turbidity levels do not exceed the threshold listed above during river's edge and in-channel project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge and in-channel construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.	Construction	Reclamation	



Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Mitigation Measure 3c</b> Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Decomposition or furrowing of riparian areas is expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until river levels rise and inundate the floodplain. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.	Pre-Construction	Reclamation	

Chapter 3.11 Cultural Resources

**Impact 3.11-2: Implementation of the proposed project could potentially result in disturbance of undiscovered prehistoric or historic resources.**

<b>Mitigation Measure 2a</b> Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of discovering cultural resources. This includes prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural resources, work within 50 feet of the find shall be halted and Reclamation's designated archaeologist consulted. Once the find has been identified, Reclamation will make the necessary plans for treatment of the cultural resources and for the evaluation and resolution of adverse effects to historic properties pursuant to the PA for compliance with the NHPA.	Pre-Construction	Reclamation	
<b>Mitigation Measure 2b</b> If human remains are encountered on non-federal lands during construction, work in that area must be halted, and the Trinity County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by Public Resources Code, Section 5097. The NAHC will notify designated Most Likely Descendants, who will provide recommendations for the treatment of the remains within 24 hours. The NAHC will mediate any disputes regarding treatment of remains. If Native American human remains and associated items are discovered on federal lands, they will be treated according to provisions set forth in the Native American Protection	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
and Repatriation Act (25 U.S.C. 3001) as well as Reclamations' Directives and Standards. If the find is determined to be a historical resource or a unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or other appropriate mitigation shall be made available. Work may continue on other parts of the proposed project while mitigation for historical or unique archaeological resources takes place.			

## Chapter 3.12 Air Quality

**Impact 3.12-1 Construction activities associated with the project could result in an increase in fugitive dust and associated particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) levels.**

<p><b>Mitigation Measure 1a</b> Reclamation shall include provisions in the construction bid documents specifying that the contractor shall implement a dust control program to limit fugitive dust and particulate matter emissions. The dust control program may include, but will not be limited to, the following elements, as appropriate:</p> <ul style="list-style-type: none"> <li>• Inactive construction areas will be watered as needed to ensure dust control.</li> <li>• Pursuant to the California Vehicle Code (Section 23114), all trucks hauling soil or other loose material to and from the construction site shall be covered or shall maintain adequate freeboard to ensure retention of materials within the truck's bed (e.g., ensure 1-2 feet vertical distance between top of load and the trailer).</li> <li>• Excavation activities and other soil-disturbing activities shall be conducted in phases to reduce the amount of bare soil exposed at any one time. Mulching with weed-free materials may be used to minimize soil erosion, as described in Section 3.3, Geology, Fluvial Geomorphology, and Soils, and Section 3.5, Water Quality.</li> <li>• Watering with either equipment and/or manually shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.</li> <li>• All paved access roads, parking areas, and staging areas shall be swept (with water sweepers), as required by Reclamation.</li> <li>• Roads shall be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation.</li> <li>• All ground-disturbing activities with the potential to generate dust shall be suspended</li> </ul>	Pre-Construction Construction	Reclamation	
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Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<p>when winds exceed 20 miles per hour, as directed by the NCUAQMD.</p> <ul style="list-style-type: none"> <li>Reclamation or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to citizen complaints.</li> </ul>			
<b>Impact 3.12-2 Construction activities associated with the project could result in an increase in construction vehicle exhaust emissions.</b>			
<p><b>Mitigation Measure 2a</b> Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD Rule 104 (3.0) Particulate Matter. This compliance could occur through the use of portable internal combustion engines registered and certified under the state portable equipment regulation (Health &amp; Safety Code 41750 through 41755).</p>	Pre-Construction Construction	Reclamation	
<b>Impact 3.12-3 Construction activities associated with the project and removal of vegetation could result in vegetative materials that managers will decide to burn.</b>			
<p><b>Mitigation Measure 3a</b> Piles will consist only of dried vegetative materials. Burn piles will be no larger than 10 feet in diameter. Field personnel will be on site during all hours of burning and materials necessary to extinguish fires will be available at all times.</p>	Construction	Reclamation	
<p><b>Mitigation Measure 3b</b> In general, all requirements of a NCUAQMD "NON-Standard" burn permit will be met for burning. Burn management planning may include but not be limited to:</p> <ul style="list-style-type: none"> <li>Ensure that burning occurs only on approved burn days as defined by the NCUAQMD (determined via calling 1-866-BURN-DAY)</li> <li>Burning will only occur during suitable conditions to ensure control of ignited fires. For instance: Water to wet the litter and duff layer and penetrate the mineral soil layer to 1/4 inch or more will be present, wind speeds will be low (&lt; 10 mph), and temperature will be low (&lt; 80° F)</li> <li>Piles may be covered with a 5-foot x 5-foot sheet of 4-mil polyethylene plastic to promote drying of the slash. At least 3/4 of each pile surface would be covered and the plastic anchored to preserve a dry ignition point. Dry fuel conditions will minimize smoke emissions.</li> <li>Slash piles would not be constructed on logs, on stumps, on talus slopes, within 25 feet</li> </ul>	Construction	Reclamation	

## Appendix 1

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
of wildlife trees with nest structures, in roadways or in drainage ditches. Piles will not be placed within 10 feet of trees intended to be saved (reserved trees), or within 25 feet of a unit boundary.			
<b>Mitigation Measure 3c</b> Notification of the public and the NCUAQMD will occur each day. Depending on wind direction and proximity to roads, signs or personnel will notify residents and traffic on nearby access routes.	Construction	Reclamation	

### 3.14 Aesthetics

#### Impact 3.14-1 Implementation of the project could result in the degradation and/or obstruction of a scenic view from key observation areas.

<p>In order to minimize impacts to visual resources resulting from the removal of vegetation within the project area, mitigation measures 1a through 1c (e.g., revegetation), as described in Section 3.7 (Vegetation, Wildlife, and Wetlands), will be implemented where applicable for either alternative.</p> <p>Visual impacts related to water quality (i.e., the potential for increased turbidity to adversely impact the aesthetic quality of the river) will be mitigated through the implementation of mitigation measures 3a through 3c, as described in Section 3.8 (Recreation). These measures will be implemented where applicable for either alternative.</p>	<p>Pre-Construction</p> <p>Construction</p> <p>Post-Construction</p>	Reclamation	
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### Chapter 3.16 Noise

#### Impact 3.16-1 Construction activities associated with the project would result in noise impacts to nearby sensitive receptors.

<b>Mitigation Measure 1a</b> Construction activities near residential areas would be scheduled between 7:00 AM and 7:00 PM, Monday through Saturday. No construction activities shall be scheduled for Sundays or other hours and days established by the local jurisdiction (i.e., Trinity County). The contractor may submit for variances in construction activity hours, as needed.	Construction	Reclamation	
<b>Mitigation Measure 1b</b> Reclamation shall require in construction specifications that the contractor maintain all construction equipment with manufacturer's specified noise muffling devices.	Pre-Construction Construction	Reclamation	

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Mitigation Measure 1c</b> Reclamation shall require in construction specifications that the contractor place all stationary noise-generating equipment as far away as feasibly possible from sensitive noise receptors or in an orientation minimizing noise impacts (i.e., behind existing barriers, storage piles, unused equipment).	Pre-Construction Construction	Reclamation	

Chapter 3.17 Public Services and Utilities/Energy

**Impact 3.17-3 Implementation of the project could result in disruption to emergency services or disruption to school bus routes or student travel routes during the construction phase.**

<b>Mitigation Measure 3a</b> Reclamation shall stipulate in the contract specifications for construction that the contractor must stage construction work and temporary closures in a manner that will allow for access by emergency service providers.	Pre-Construction Construction	Reclamation	
<b>Mitigation Measure 3b</b> Reclamation shall stipulate in the contract specifications that the contractor must provide 72-hour notice to the local emergency providers (i.e., TCSD, Cal Fire, Lewiston Volunteer Fire Department, and Trinity Life Support Ambulance) prior to the start of temporary closures.	Pre-Construction Construction	Reclamation	

Chapter 3.18 Transportation/Traffic Circulation

**Impact 3.18-3. Implementation of the project would obstruct access to adjacent land uses.**

<b>Mitigation Measure 3a</b> Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project boundary and access roads on the left side of Trinity River.	Pre-Construction Construction	Reclamation	
<b>Mitigation Measure 3b</b> During the construction phase of the project, Reclamation shall limit the amount of daily construction equipment traffic by staging most construction equipment and vehicles within the project boundary throughout the work period.	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
<b>Impact 3.18-4. Construction activities would increase wear-and-tear on local roadways.</b>			
<b>Mitigation Measure 4a</b> Reclamation or its contractor shall perform a pre-construction survey of federal, state, and private roads to determine the existing roadway conditions of the construction access routes. An agreement would be entered into prior to construction that would detail the pre-construction conditions and post-construction requirements for potential roadway rehabilitation.	Pre-Construction Construction Post-Construction	Reclamation	
<b>Impact 3.18-5. Construction activities could pose a safety hazard to motorists, bicyclists, equestrians, pedestrians, and construction workers.</b>			
<b>Mitigation Measure 5a</b> Reclamation shall include provisions in the contract specifications that require the construction contractor to prepare and implement a traffic control plan that would include provision and maintenance of temporary access through the construction zone, reduction in speed limits through the construction zone, signage and appropriate traffic control devices, illumination during hours of darkness or limited visibility, use of safety clothing/vests to ensure visibility of construction workers by motorists, and fencing as appropriate to separate pedestrians and bicyclists from construction activities.	Pre-Construction Construction	Reclamation	



## **Coho Salmon Mitigation Measures**

# Coho Salmon Mitigation Measures

## Introduction

This document summarizes the mitigation measures for potential impacts to coho salmon (*Oncorhynchus kisutch*) resulting from the Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7 (project). The purpose of providing this summary as a stand-alone document in the EA/Final EIR is to make clear to the reader the mitigation responsibilities as regards coho salmon of the Bureau of Reclamation (Reclamation), and the Trinity County Planning Department (Trinity County) in implementing the project. The mitigation measures listed herein are required by law or regulation and will be adopted by Trinity County as part of the overall project approval.

## Mitigation Measures

- The proposed construction schedule includes in-river work that could affect spawning spring- and fall-run Chinook salmon, coho salmon, and steelhead or their eggs once in the gravel. To the maximum extent possible, Reclamation will ensure that all in-river construction activities are conducted during late-summer, low-flow conditions (e.g., July 15–September 15). If in-river work activities will be conducted after September 15 (during spawning), work will be coordinated with biologists from NMFS and CDFG to ensure that impacts are minimized.
- Alluvial material used for coarse sediment additions will be composed of washed, spawning-sized gravels (3/8 to 5 inches diameter) from a local Trinity River basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants, such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.
- Turbidity increases associated with project construction activities shall not exceed the Regional Water Quality Control Board (Regional Water Board) water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.

- Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits.
- To ensure that turbidity levels do not exceed the threshold listed above during project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of construction activities. At a minimum, field turbidity measurements shall be collected on a daily basis during in-water and river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours.
  - If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting in-channel construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.
- Proper implementation of erosion and sediment containment devices during and after construction shall be adequate to minimize sediment inputs into the Trinity River. Decompaction and ripping of floodplain areas is expected to eliminate surface runoff during the first year post-construction.

Because shoreline construction activities must be able to take place during the fall and potentially during the winter (after October 15 and before April 15), temporary erosion and sediment control structures must be in place and operational at the end of each construction day. Measures for erosion control will be prioritized based on proximity to the river.

Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.

- Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes Best Management Practices (BMPs) for the project. Ripping of all riparian areas to create furrows parallel to the river is expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until construction ends. All sediment containment devices and erosion control devices will be inspected daily

during the construction period to ensure that the devices are functioning properly.

Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if a greater than 50 percent possibility of rain has been forecast within the following 24 hours by the National Weather Service. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.

- Construction specifications shall include the following measures to reduce potential impacts associated with accidental spills of pollutants (fuel, oil, grease, etc.) to vegetation and aquatic habitat resources within the project boundary:
  - Equipment and materials shall be stored away from wetland and surface water features.
  - Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 150 feet away from waters of the Trinity River or within an adequate fueling containment area.
  - The contractor will develop and implement site-specific BMPs, a water pollution control plan, and emergency spill control plan. The contractor will be responsible for immediate containment and removal of any toxins released.
- To avoid or minimize potential injury and mortality of fish during riverine activities (removal of grade control structures, channel crossings, addition and grading of coarse sediment), equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.
- Reclamation or its contractor shall minimize potential injury and mortality of fish during the use of low-flow channel crossings. This will be accomplished by minimizing vehicle traffic and by operating equipment and vehicles slowly and deliberately to alert and scare adult and juvenile salmonids away from the crossing area, or by having a person wade ahead of equipment to scare fish away from the crossing area.
- To avoid or minimize potential injury and mortality of fish during excavation and placement of fill materials within the active low-flow channel, equipment

shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area. The contractor shall be instructed that before submerging an excavator bucket or laying gravel below the water surface, the excavator bucket will be operated to "tap" the surface of the water, or a person will wade ahead of fill placement equipment to scare fish away from the work area. To avoid impacts to mobile life stages of salmonids that may be present in the water column, the first layers of clean gravel that are being placed into the wetted channel shall be added slowly and deliberately to allow fish to move from the work area.

- Monitoring of the rehabilitated floodplain sites for salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of flood flow events designated as a 1.5- year or less frequent event (i.e.,  $Q \geq 6,000$  cfs) for a period of 3 years following construction. These flows, and associated fry stranding surveys, would occur most frequently between January and May. If substantial stranding is observed, Reclamation will take appropriate measures to return stranded fishes to river habitats and to modify floodplain topography to reduce the likelihood of future occurrences of fry stranding.
- To maintain overall SRA habitat values within the project reach, the Proposed Action would be designed to minimize losses of riparian vegetation adjacent to the Trinity River channel, except where necessary to re-activate river access to the floodplain. Boundary markers shall be installed along all riparian areas outside of delineated rehabilitation areas. These markers will prevent construction access so that impacts to riparian vegetation are minimized. To compensate for the loss of riparian vegetation within the project boundaries, Reclamation shall implement the following measures:
  - To mitigate for the loss of riparian habitat, the project will be designed to preserve riparian vegetation within the site boundaries (1) to increase the diversity of native vegetation types and age classes available post-project and (2) to facilitate natural recolonization of constructed surfaces by native vegetation. Prior to the start of construction activities, Reclamation shall identify potential construction access routes that avoid and/or minimize, to the fullest extent, impacts to riparian habitat. In addition, Reclamation shall clearly identify and flag biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected during construction activities. Each biologically sensitive area to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Reclamation shall inspect and maintain marked areas regularly throughout the construction phase.
  - Reclamation shall develop a Riparian Revegetation and Monitoring Plan, subject to approval by the U.S. Army Corps of Engineers (USACE), the Regional Water Board, and California Department of

Fish and Game (CDFG), prior to implementing the proposed project. The plan shall include measures that ensure that all riparian vegetation removed by the Trinity River Restoration Program (TRRP) projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam will be replaced by natural recruitment, replanting, or any combination thereof, at an areal ratio of 1:1, within a 5- year time-frame. These measures shall support the TRRP objective to restore the existing homogeneous vegetation pattern with a more diverse assemblage of riparian vegetation, including provisions for incorporation of native species that can resist invasion by noxious plant species. Because the existing Trinity River channel is encroached upon (up to 300 percent) by a homogeneous riparian vegetation community thought to be less suitable for fish and wildlife habitat, the plan need not require strict replacement based on original stem counts and species.

- Reclamation shall initiate a 5-year mitigation monitoring program following the first growing season after project implementation. After a period of 3 years, Reclamation, in consultation with USACE, the Regional Water Board and CDFG, will determine the need, if any, for additional plantings and will assess and/or remedy any loss of riparian habitat, including jurisdictional wetlands within the site boundaries, defined in the EA/EIR, to ensure that no-net loss of wetlands and riparian habitat occurs within the 5-year monitoring period. Monitoring the response of riparian habitat to the channel rehabilitation project after 3 years into the 5-year vegetation recovery period will allow Reclamation to take any additional necessary actions to meet the goal of no net-loss of riparian habitat within the boundaries of the Lewiston and Dark Gulch sites.
- Reclamation shall complete a post-project wetland delineation and vegetation habitat evaluation as a basis for comparing pre- and post-project conditions and submit the results to USACE, the Regional Water Board, and CDFG. This post-project vegetation survey will occur approximately 5 years after revegetation is completed. In the event that this delineation identifies a net loss in riparian habitat, Reclamation shall enhance or reestablish riparian vegetation that will function as SRA habitat within the boundaries of the rehabilitation sites. Potential options to accomplish this objective include increasing the density and diversity of riparian vegetation to supplement natural recruitment and introducing riparian plants in locations to expand riparian habitat. In the event that conditions within the boundaries of the Lewiston and Dark Gulch sites preclude adequate onsite mitigation, Reclamation may consider alternate locations for riparian vegetation mitigation within the Trinity River corridor, subject to approval by USACE, the Regional Water Board, and CDFG.



- Fill gravels used on the low water crossings, streambeds, and stream banks will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.
- Reclamation or its contractor shall construct the low-flow channel crossings to allow adequate depth and velocity for adult and juvenile salmonids to safely pass. Flows associated with storm events are not considered critical as the width and hydrologic conditions associated with low-flow channel crossings in the Trinity River are not considered to limit fish passage at elevated flows and would be comparable to hydrologic conditions in local riffle-and-run features. For low-flow channel crossings at base flows, velocities shall not exceed 2 fps to allow for juvenile fish passage. Minimum water depth at low flow shall not be less than 12 inches in two-thirds of the river channel to provide adequate depth for adult salmon and steelhead passage.
- The number of vehicle and equipment crossings of the Trinity River will be minimized.

## **Additional Measures**

In addition to the mitigation measures detailed above and in the EA/Draft EIR, Reclamation shall implement the following measures:

- Reclamation will implement all practical measures to minimize sedimentation/turbidity in the mainstem arising from the proposed mechanical disturbances.
- Reclamation will coordinate with the National Marine Fisheries Service (NMFS) and other resource agency partners to develop construction techniques which might further reduce turbidity impacts.
- Following completion of the ROD addressing the proposed action, Reclamation shall immediately implement the components of the proposed flow schedule (as described in the Trinity River Mainstem Fisheries Restoration (TRMFR) Draft Environmental Impact Statement (DEIS), page 2-19, Table 2-5) equal or less than 6,000 cfs, and implement the entire flow schedule as soon as possible.
- As necessary infrastructure modifications are made, Reclamation shall incrementally implement higher Trinity River flows (consistent with the proposed flow regime).

- Reclamation shall provide two reports per year detailing flows released into the Trinity River below Lewiston Dam; reports will be provided to NMFS by August 31 and March 31 annually.
- Reclamation shall meet with NMFS annually in March to coordinate during the advanced development and scheduling of habitat rehabilitation projects, including mainstem rehabilitation projects, sediment augmentation program, and dredging of sediment collection pools.
- Reclamation shall provide for review of individual mainstem channel rehabilitation projects via the technical team or equivalent group, and provide a written recommendation to NMFS whether the projects are similar to those described in the TRMFR DEIS and should be covered by the Incidental Take Statement (ITS); if the technical team determines that these projects and their impacts to aquatic habitat are substantially different than described in the TRMFR DEIS and USFWS and Reclamation (2000), the technical team will recommend to NMFS that additional Federal Endangered Species Act (ESA) Section 7 consultation is appropriate.
- Reclamation shall initiate emergency consultation procedures during implementation of any flood control or “safety of dam” releases, pursuant to 50 CFR §402.05.
- Reclamation shall be prepared to make use of auxiliary bypass outlets on Trinity Dam as needed, and pursuant to re-initiation of ESA Section 7 consultation regarding Sacramento River Winter-run Chinook salmon, to protect water quality standards; associated actions may include modification of the export schedule of Trinity Basin diversions to the Sacramento River.
- Reclamation shall make every effort to ensure that the entire Mainstem Trinity River Restoration Program is funded and implemented.